



# ICAO

*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 5 (c):**

### **Technical Architecture**

- Task 4: Development and Maintenance of Regional Information Exchange Models

## **OUTCOMES OF THE ATFM/SG/15 MEETING ON RELATED MATTERS**

(Presented by Secretariat)

### **SUMMARY**

This paper presents outcomes of discussions on SWIM related working papers and draft conclusions thereof in the ATFM/SG/15 meeting held in April-May 2025.

## **1. INTRODUCTION**

1.1 The Meteorology/Air Traffic Management (MET/ATM) Seminar and Fifteenth Meeting of Air Traffic Flow Management Steering Group (ATFM/SG/15) were held in Bangkok, Thailand from 28 April to 2 May 2025. The meeting included a joint plenary session with the 14<sup>th</sup> Meeting of Meteorological Requirements Working Group (MET R/WG/14).

1.2 The Ninth Meeting of the System Wide Information Management Task Force (SWIM TF/9) had requested the ATFM/SG develop a detailed process for revising a mutually agreed FIXM version for cross-border ATFM-related information exchange during ATFM/SG/15 meeting and share with the SWIM TF/10 meeting for further discussion.

1.3 The ATFM/SG/15 meeting discussed the following WPs on the related subjects.

- i. Update on FIXM V4.3 Extension Development for Asia/Pacific Region (ATFM/SG/15/WP/07)
- ii. Establishment of a Change Process of Flight Information Exchange Model (FIXM) Version for Asia/Pacific Cross-Border Operational ATFM System-To-System Information Exchange in System Wide Information Management (SWIM) (ATFM/SG/15/WP/24)
- iii. Finalization of APAC Common SWIM Information services (ATFM/SG/15/WP17)

1.4 The discussions and draft conclusions thereof are noted in the following sections.

## **2. DISCUSSION**

### Update on FIXM V4.3 Extension Development for Asia/Pacific Region (ATFM/SG/15/WP/07)

2.1 The Meeting was briefed on the update on FIXM version 4.3 Extension development to support cross-border ATFM operation, A-CDM, ATFM/A-CDM integration, and traffic synchronization in the Asia/Pacific region. This effort aimed to ensure the readiness of FIXM Extension in alignment with Conclusion APANPIRG/35/4 which agreed on the adoption of FIXM version 4.3 as the standard format for the region.

2.2 The technical Sub-Group (TSG) of Asia/Pacific Cross Border Multi-Nodal ATFM Collaboration (AMNAC), together with members of SWIM TF, examined the feasibility of using FIXM version 4.3 Core to support cross-border ATFM operation, A-CDM, ATFM/A-CDM integration, and traffic synchronization. It was found that FIXM version 4.3 Core can support the exchange of certain data attributes originally included in the Asia/Pacific FIXM version 4.1 Extension. Specifically, it was considered that FIXM version 4.3 Core can be used for exchange of CTOT, Calculated Time Over (CTO), and Calculated Landing Time (CLDT).

2.3 It was concluded that trajectory and aircraft track data attributes included in the Asia/Pacific FIXM version 4.2 Extension would be removed from the subsequent version of the Extension due to availability of alternative data formats.

2.4 To facilitate a smooth transition from the use of ADEXP Slot Allocation Message (SAM), Slot Revision Message (SRM), and Slot Cancellation Message (SLC) over AFTN/AMHS to ATFM information exchange over SWIM, mandatory data fields and some optional fields currently in use in SAM/SRM/SLC were identified for inclusion in the FIXM version 4.3 Extension. The Meeting agreed upon the list of data attributes in Appendix A of WP/07 to be included in the regional FIXM version 4.3 Extension.

2.5 The Meeting acknowledged that upon successful validation, the Regional FIXM version 4.3 Extension would be proposed for adoption by SWIM TF.

2.6 The list of data attributes is attached in the Appendix A.

### Establishment of a Change Process of Flight Information Exchange Model (FIXM) Version for Asia/Pacific Cross-Border Operational ATFM System-To-System Information Exchange in System Wide Information Management (SWIM) (ATFM/SG/15/WP/24)

2.7 The Meeting was informed on the recommendations for the change process of the FIXM version used for cross-border ATFM information exchange in a SWIM environment as assigned by ATFM SG/14 to the AMNAC TSG.

2.8 Noting the potential necessity to revise the Cross-Border FIXM Operating version, the Meeting agreed on the following change process as proposed by AMNAC TSG:

- a. Submit the proposed change to the FIXM version, in the form of Working Paper, to ATFM SG for review and assessment of its operational impacts and suitability in supporting regional operational requirements;
- b. Upon adoption by ATFM SG, submit the proposal to SWIM TF for review and assessment of its technical implications; and
- c. Following agreement by SWIM TF, submit a summary of the change proposal to ATM SG for approval, and subsequently to APANPIRG for endorsement.

2.9 The Meeting also agreed to the content of change proposal as recommended by AMNAC TSG as below:

- a) Name of State(s) or collaboration group, including the specific names of organizations, proposing the change;
- b) Proposed FIXM version;
- c) Reason(s) for the proposed change(s);
- d) Testing result of the proposed version; and
- e) Proposed timeframe for the change to take effect (*a minimum lead time of 2 years is required*)

2.10 The meeting agreed to the following Draft Conclusion

<b>Draft Conclusion ATFM/SG/15-X: Change Process of the FIXM Version Used for Asia/Pacific Cross-Border Operational ATFM System-to-System Information Exchange in SWIM</b>	
<p>What: That, the change process for the Cross-Border FIXM Operating Version be</p> <ol style="list-style-type: none"> <li>a) Submit the proposed change to the FIXM version, in the form of Working Paper, to ATFM SG for review and assessment of its operational impacts and suitability in supporting regional operational requirements;</li> <li>b) Upon adoption by ATFM SG, submit the proposal to SWIM TF for review and assessment of its technical implications; and</li> <li>c) Following agreement by SWIM TF, submit a summary of the change proposal to ATM SG for approval, and subsequently to APANPIRG for endorsement.</li> </ol> <p>and content of change proposal be</p> <ol style="list-style-type: none"> <li>a) Name of State(s) or collaboration group, including the specific names of organizations, proposing the change;</li> <li>b) Proposed FIXM version;</li> <li>c) Reason(s) for the proposed change(s);</li> <li>d) Testing result of the proposed version; and</li> <li>e) Proposed timeframe for the change to take effect (<i>a minimum lead time of 2 years is required</i>)</li> </ol> <p>To be adopted as a regional process for revision of FIXM version for cross-border ATFM information exchange.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>

Why: To ensure effective communication, interoperability, reduced risk of incompatibility among ATFM systems within the Asia/Pacific region, as well as aligned implementations of all stakeholders.	Follow-up: <input type="checkbox"/> Required from States
When: 29-Aug-2025	Status: Draft to be adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: SWIM TF/10	

APAC Common SWIM Information Services (ATFM/SG/15/WP17).

2.11 ICAO Secretariat presented a working Paper on APAC Common SWIM Information Services (WP17). The Meeting was presented on the matter to confirm the business functionality of APAC Common SWIM information Services proposed by SWIM TF.

2.12 The Meeting was asked to provide comment and input to the portion of APAC Common SWIM Flight Information Services, specifically the “ATFM/A-CDM integrated service” and “Traffic flow status service”.

2.13 The Meeting reviewed the document and advised that further verification of the terminology used in the “Proposed business functionality of APAC Common SWIM Information Services” compared to the draft PfA of future ICAO PANS-ATM. The Meeting would revert to the SWIM TF with the confirmation before the next SWIM TF meeting.

2.14 After the meeting the ICAO Secretariat has received feedback and comments from the ATFM/SG members, which is attached as Appendix B.

### 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) review the FIXM version 4.3 Extension Data Attributes as presented in **Appendix A**;
- c) review Change Process of the FIXM Version as presented in paragraph 2.10;
- d) review feedback on APAC Common SWIM Information Services related to ATFM and A-CDM as presented in **Appendix B**; and
- e) discuss any relevant matter as appropriate

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## Appendix A

### 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, latest version*

SWIM TF/10  
Appendix B to WP/32

**APAC Common SWIM Information Services**

Business Functionality of the Service	Brief Description of the Service	Types of Information to be Exchanged	Information Exchange Model / Message Type	Message Exchange Pattern	Recommended Service in Initial APAC Common SWIM IS
<b>Propose removing...</b>					
<del>ATFM/A-CDM Integrated Service</del>	<del>Allows exchanges of flight plans and A-CDM milestone parameters among different stakeholders (such as arrival/departure ATFM units, airlines and airport operators) to connect A-CDM process to ATFM operations.</del>	<del>CTOT, CTO, TTOT, TSAT, etc.</del>	<del>FIXM</del>	<del>Pub/Sub</del>	<del>1</del>
<del>Traffic Flow Status Service</del>	<del>Provides users with notification of any traffic flow management measures which are in affect and how they may affect their aircraft.</del>	<del>Demand and constraints, Miles-in-Trail (MIT), Minutes-in-Trail (MINIT), ATFM daily plan, Ground Delay Program (GDP)</del>	<del>TBD</del>	<del>Pub/Sub</del>	<del>2</del>
<b>And replacing with...</b>					

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Business Functionality of the Service	Brief Description of the Service	Types of Information to be Exchanged	Information Exchange Model / Message Type	Message Exchange Pattern	Recommended Service in Initial APAC Common SWIM IS
ADP Distribution Service	<p>Supports publication and distribution of ATFM Daily Plan (ADP), based on information included in the <a href="#">APAC ADP Exchange Procedure</a><sup>1</sup>.</p> <p>The published ADP is designed to <i>inform</i> for stakeholders on upcoming demand/capacity constraints and <i>possible</i> ATFM measures.</p>	Refer to ADP template	FLXM?	Pub/Sub	1

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<sup>1</sup> The ADP template included herein is not updated. The new ADP template had been agreed by the AMNAC group and included into the [AMNAC COP v6.1](#), Appendix D, and was proposed to the ATFM/SG/15 (Apr-May 2025). The meeting agreed that the Secretariat will update the ADP Exchange Procedure to include the new template, which has already been supplied by AMNAC core team post-meeting.

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Business Functionality of the Service	Brief Description of the Service	Types of Information to be Exchanged	Information Exchange Model / Message Type	Message Exchange Pattern	Recommended Service in Initial APAC Common SWIM IS
Flight-Specific ATFM Measure Service	<p>Supports <i>notification</i> of information related to “flight-specific” ATFM measures, i.e. measures whose control mechanisms apply to a single flight. An 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).</p> <p>Recipients of this information should take actions to comply with the ATFM measure contained herein.</p>	CTOT, CTO, CLDT, and fields currently included in <a href="#">APAC AFTN/AMHS-Based ICD for ATFM</a> <sup>2</sup>	FIXM	Pub/Sub Req/Reply	1

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<sup>2</sup> 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.



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Business Functionality of the Service	Brief Description of the Service	Types of Information to be Exchanged	Information Exchange Model / Message Type	Message Exchange Pattern	Recommended Service in Initial APAC Common SWIM IS
Flow-Specific ATFM Measure Service	<p>Supports <i>notification</i> of information related to “flow-specific” ATFM measures, i.e. measures whose control mechanisms apply to a “group of flights” on a particular traffic flow. An example is the Minutes-in-Tail (MINIT) requirement applied on an eastbound traffic using A1 from VT*, VV* to RK*.</p> <p>Recipients of this information should take actions to comply with the ATFM measure contained herein.<sup>3</sup></p>	<p>Spacing parameters for MINIT, MIT;</p> <p>Departure intervals for MDI;</p> <p>Alternate routes for Re-Routing;</p> <p>Flight level allocation for Level Capping</p>	TBD	Pub/Sub	2 or 3
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.	<p>ATFM measure information: CTOT</p> <p>A-CDM departure planning information: TOBT, TTOT, TSAT</p>	FIXM	Pub/Sub Req/Reply	1

<sup>3</sup> Common operating procedure for this group of ATFM measures (e.g., MINIT, MIT, MDI, Re-Route, Level Capping) has not been developed for the APAC region yet, and should be developed before finalizing the information service to support the operations.