



**INTERNATIONAL
CIVIL AVIATION
ORGANIZATION**



Journey of ICAO APAC SWIM Task Force

Dr Soniya Nibhani, Regional Officer (ANS Implementation), ICAO APAC Office, Thailand

Agenda

01

Formation of SWIM TF

How was SWIM TF formed in the APAC Region?

02

SWIM TF Journey till date

03

Conclusion

Key message

01

Formation of SWIM TF



**The First Meeting of System Wide Information Management Task Force
ICAO Regional Office, Bangkok, Thailand, 10-12 May 2017**



12th Air Navigation Conference

ICAO Headquarters

Montréal, Canada

19–30 November 2012



AN Conf/12- ICAO, Montréal, Canada, 19 - 30 November 2012

- ✓ SWIM Identified as a Key Enabler for Future ATM
- ✓ Transition from Point-to-Point Systems to Service-Oriented Information Sharing
- ✓ AN-Conf/12 concluded that ICAO should develop a global SWIM concept to provide a harmonized vision for worldwide implementation.
- ✓ The Conference emphasized that without common guidance, States and regions could develop incompatible SWIM solutions, reducing global interoperability
- ✓ SWIM included in GANP ASBUs

3.2.7 Based on the discussions, the Committee expressed its full support for the ASBU modules related to SWIM and agreed that there was a need for a global SWIM concept as the basis for further work. In consideration of the above, the Committee endorsed ASBU Modules B1-31 and B2-31.



CNS SG/17- Bangkok, Thailand, 13 – 17 May 2013

- Status of SWIM Operational Concept (WP/20)
- Regional SWIM Development Considerations (WP/28)



The meeting discussed and agreed that a **regional SWIM Governance plan** may be developed when the SWIM Operational Concept becomes available. Japan stated that demonstration of the SWIM concept should be carried out before further development of SWIM Governance.

4.19 The meeting appreciated the efforts made by Republic of Korea regarding the development of SWIM. However, it was felt that it might not be mature enough to establish specific mechanism to address SWIM study before its concept matured by ICAO at global level. It was agreed that the Secretariat would coordinate with Chair of ATNICG to include this item into the agenda of the ATNICG WG meeting to be held in August 2013 and next ATNICG meeting in April 2014.



Assembly – 38th Session- ICAO, Montréal, Canada, 24 Sep 2013 - 04 Oct 2013

- ANB developed a draft Projects Prioritization that lists the SWIM Operational Concept as a top priority.
- Assembly 38 elevated SWIM from a developing concept to a globally endorsed enabler of the ICAO ASBU framework, emphasizing standardized, interoperable information sharing as the foundation for future trajectory-based and collaborative ATM operations.



CNS SG/18- (Beijing, China, 21 – 25 July 2014)

- System Wide Information Management (SWIM) CONOPS and Implementation Requirement (WP/9)
 - ✓ The draft SWIM CONOP was expected to be finalized by the ATMRPP meeting scheduled for the end of October 2014.
 - ✓ Some States and Administrations in the Region started conducting SWIM research and trials, and a mini-SWIM demonstration was planned for a presentation at the APANPIRG/25 meeting in September 2014



APANPIRG 25- Kuala Lumpur, Malaysia, 8 to 11 September 2014

Conclusion APANPIRG 25/43 – Promote understanding of SWIM in APAC Region

That, recognizing SWIM as a building block of ASBU Block 1 and 2 modules, ICAO be invited to promote understanding of SWIM through organizing seminars/workshops with focus on both technical and operational aspects for SWIM development in the Asia Pacific Region.

CNS SG/19- Bangkok, Thailand, 20 – 24 July 2015

SWIM Seminar/Workshop in 2016

3.10 To follow up APANPIRG Conclusion 25/43 - Promote understanding of SWIM in APAC Region with focus on both technical and operational aspects for SWIM development, a workshop is scheduled for April-June 2016. States/Administrations were invited to support the event by providing SME. USA, China, Japan and Singapore expressed their willingness to support the event. Australia, Republic of Korea and Thailand were requested to confirm their support. Australia recommended conducting the workshop in conjunction with other associated meeting so approval of travel for participants from States would be justified.



ICAO APAC/MID SWIM WORKSHOP (Bangkok, Thailand, 16 -18 May 2016)

- 22 APAC States/Administrations
- 5 MID States
- 4 International and Regional Organizations
- 9 Aviation Industries
- 1 Research Institute
- 1 Airline
- 5 MET service providers
- 2 Aviation Institutes

CNS SG/20- (Bangkok, Thailand, 11 – 15 July 2016)

Decision CNS SG/20-D3: Establishment of SWIM Task Force			
What:		That, the SWIM Task Force be established with the terms of reference placed at Appendix D .	
		Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why:		A task force is needed to achieve the objectives of B1-SWIM and of the seamless ATM plan related to SWIM.	
When:	15-Jul-16	Status:	Adopted by Subgroup
Who:		☐ Sub groups ☒ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☒ Other: IATA, ICCAIA	

02 SWIM TF Journey



SWIM TF

Key progress in SWIM TF Meetings

First Meeting of SWIM TF- 10 to 12 May 2017, Bangkok, Thailand

1. *Work Plan for SWIM TF*
2. *Task Structuring- Task 1.1 to 1.6 and 2.1.1 to 2.1.4*
3. *WP/02- SWIM in ASEAN demonstration- Singapore & Thailand- **Action 1-2 (all participants): Confirm their interest in ASEAN SWIM demonstration***
4. *2017 APAC/EUR/MID Seminar on “Service Improvement through Integration of AIM, MET AND ATM Information Services”*
5. *SWIM TF space under the ICAO secure portal*
6. *Need for SOW consolidation*

SWIM TF

Key progress in SWIM TF Meetings

Second Meeting of SWIM TF- 10 to 12 May 2017, Bangkok, Thailand

- 1. Survey on SWIM service needs to support the future planning of SWIM services to be implemented in APAC*
- 2. Guidance and recommendations for the implementation of standardized SWIM Information Models*
- 3. Proposals on the milestones for the Asia/Pacific SWIM regional roadmap*
- 4. Preparation for the SWIM in ASEAN Demonstration for 2019*

SWIM TF

Key progress in SWIM TF Meetings

Third Meeting of SWIM TF- 07 to 10 May 2019, Bangkok, Thailand

1. *SWIM in ASEAN Demonstration held on **09 – 11 April 2019***
2. *Draft table of contents for the SWIM regional implementation guidance document (SWIM IGD)*
3. *The target date for completion of the regional document would be after the availability of the global implementation manual, as the gap for the regional need could be identified.*
4. *A SWIM Implementation Philosophy and Roadmap (WP/19) (Draft Conclusion SWIMTF/3/1)*
5. *Decision SWIMTF/3/2 – Guidance for Creating SWIM Service Identifiers and Versioning SWIM Services*
6. *Draft Conclusion SWIM TF/3/4: Asia/Pacific Regional FIXM Extension for ATFM*
7. *The Result of APAC SWIM Survey (WP/18) - Multi-nodal/cross-border ATFM, A-CDM, FF-ICE were considered as the most important operations that could benefit from SWIM*

SWIM TF

Key progress in SWIM TF Meetings

Third Meeting of SWIM TF- 07 to 10 May 2019, Bangkok, Thailand

1. SWIM in ASEAN Demonstration held on **09 – 11 April 2019**
2. Draft table of contents for the SWIM report (IGD)
3. The target...

5.3 Considering the SWIM survey result, the meeting agreed that higher priority should be given to the SWIM implementation for cross-border ATFM and A-CDM operations and the associated required information services mentioned above. The example of operation scenario template provided in Appendix A of WP/19 could be used as a reference to aid the identification of information services required.

SWIM Service Identifiers and Versioning

- SWIM TF/3/4: Asia/Pacific Regional FIXM Extension for ATFM
- The Result of APAC SWIM Survey (WP/18) - Multi-nodal/cross-border ATFM, A-CDM, FF-ICE were considered as the most important operations that could benefit from SWIM

SWIM TF

Key progress in SWIM TF Meetings

Fourth Meeting of SWIM TF- 3 - 6 November 2020, Teleconference

1. *Revised SWIM TF Task Group*
2. *SWIM Technical Overview Centered around CRV (IP07)*
3. *Collaboration in Sharing of Surveillance Data in SWIM (WP13)*

The ICAO APAC SWIM Workshop- 6 July to 7 July 2021, Teleconference

Fifth Meeting of SWIM TF- 9 – 11 August 2021, Teleconference

1. *Proposal to Survey SWIM Implementation Plan and Status in Asia/Pacific- Singapore and Thailand (WP/17)- Conclusion CNS SG/25/03 (SWIM TF/5/01)*
2. *Revised SWIM TF Terms of Reference- “SWIM over CRV”*
3. *Multi-regional TBO demonstration- Japan, Singapore, Thailand, and USA (WP/15)*
4. *Proof-of-concept for surveillance data sharing on SWIM by Surveillance Study Group (SURSG) - Hong Kong, China (WP/20)*

SWIM TF

Key progress in SWIM TF Meetings

Sixth Meeting of SWIM TF- 17 – 20 May 2022, Teleconference

1. *Draft Decision SWIM TF/06/01 - The Use of the Internet for MET Information Services in Regional SWIM architecture*
2. *Proposal for the Establishment of the Surveillance Sharing in the SWIM Trial Implementation Group (S3TIG)*
3. *Draft Conclusion SWIM TF/06/02 - The Asia-Pacific SWIM Implementation Timeframe*
4. *Draft Decision SWIM TF/06/03 - Harmonization of Timelines for SWIM-related Initiatives*
5. *Draft Conclusion SWIM TF/06/04 Inclusion of the Asia/Pacific SWIM Implementation in the Asia/Pacific Seamless ANS Plan*
6. *Result of Asia/Pacific SWIM Implementation Plan and Status Survey*
7. *Draft Decision SWIMTF/06/07 – Revised SWIM TF Terms of Reference- SWIM principally over CRV and other IP networks*

SWIM TF

Key progress in SWIM TF Meetings

Seventh Meeting of SWIM TF- 9 – 12 May 2023, Bangkok, Thailand

1. *Endorsement of Surveillance data sharing in the SWIM Trial under S3TIG and SWIM over CRV Demonstration should be conducted as **a Joint Event***
2. *Decision SWIM/TF/07/01 – Formation of an Editorial Task Ad-Hoc Group for the Asia/Pacific SWIM Implementation Guidance Documentation*
3. *Decision SWIM/TF/07/03 – Formation of the SWIM Implementation Pioneer Ad-hoc Group*
4. *Coordination needs to prepare a comprehensive list of information for Common SWIM Flight Information Services, Common SWIM Aeronautical Information Services, Common SWIM Meteorological Information Services, and Common SWIM Surveillance Information Services*

SWIM TF

Key progress in SWIM TF Meetings

Eighth Meeting of SWIM TF- 8 to 10 November 2023, Bangkok, Thailand

1. *Draft Decision SWIM TF/08/01 Adoption of SWIM Discovery Service as a Global Standard for Globally Interoperable Service Discovery*
2. *Draft Decision SWIM TF/08/02 Candidate Baseline SWIM Discovery Service Standard for Asia/Pacific*
3. *Proposed Business Functionality of APAC Common SWIM Information Services and the Information to be Exchanged – Hong Kong China (WP/08)*
4. *The Meeting agreed to review the list of proposed business functionality of APAC Common SWIM Information Services and provide inputs and comments for further refinement by filling out the online voting for proposed APAC Common SWIM Information Services accessible via this link before 15 December 2023*

SWIM TF

Key progress in SWIM TF Meetings

Ninth Meeting of SWIM TF- 14 to 17 May 2024, Bangkok, Thailand

- 1. Joint event planned- 28-29 May 2024 in Hong Kong China*
- 2. Draft Decision SWIM TF/09/01 – Draft APAC SWIM Technical Infrastructure Profiles v1.0*
- 3. The first draft of APAC Common SWIM Information Services- Hong Kong China, together with relevant subject matter experts of SWIM TF, will present the finalized version to the next meeting of AAITF, ATFM SG, FF-ICE Ad-hoc group, MET/IE WG, SURSG, MET SG, AOP SG, and ATM SG. All comments received from all proposed groups will be presented to SWIM TF/10*
- 4. Regional SWIM event from 6-8 November 2024 in Indonesia*

SWIM TF

Key progress in SWIM TF Meetings

- **ICAO Asia/Pacific SWIM Seminar 19 May 2025- Establishing SWIM – A Key Enabler for FF-ICE**
- **Tenth Meeting of SWIM TF- 20-23 May 2025, Bangkok, Thailand**
 1. Great progress was made by SIPG
 2. ANSIA TF formation and their role
 3. Draft Decision SWIM TF/10/02 - Adoption of APAC Common SWIM Information Services, v1.0
 4. Need for SWIM Indicators

SWIM TF

Key progress in SWIM TF Meetings

60th Conference of Directors General of Civil Aviation Asia and Pacific Regions- Sendai, Japan, 28 July - 1 August 2025

DP/4/05 DP/4/18	Action Item 60/20	Noting that APANPIRG has set the Asia/Pacific SWIM implementation timeframe to be between 2024 - 2030, acknowledging that SWIM is an enabler for the current operations, such as the regional ATFM network and future operations, e.g., FF-ICE, TBO, and the SWIM implementation harmonized across the region is crucial to achieve region-wide benefits, the Conference encouraged: a) States/Administrations to: i. collaborate and jointly participate in building a regional and global information interoperability framework; ii. participate in SWIM-related seminars and workshops organized by the ICAO APAC Office to overcome SWIM implementation challenges; and b) ICAO to organize SWIM-related seminars and workshops.
--------------------	-------------------	---

SWIM TF

Key progress in SWIM TF Meetings

Eleventh Meeting of SWIM TF- 25 – 29 May 2026, Bangkok, Thailand

Reference Number	Title of (Draft) Conclusions/Decisions
1. Draft Decision SWIM TF/11/01	- Need for Alignment of Information Service Definitions across Regions
2. Draft Conclusion SWIM TF/11/02	- Adoption of ATFM FIXM Message Data Attributes and Associated Message Templates Based on FIXM Version 4.3 as Asia/Pacific Regional Standard
3 Draft Conclusion SWIM TF/11/03	- Adoption of SWIM Discovery Service baseline standardised version for the APAC Region- SDS v2.0
4. Draft Decision SWIM TF/11/04	- Adoption of APAC Common SWIM Information Services, v2.0

SWIM TF

Key progress in SWIM TF Meetings

Eleventh Meeting of SWIM TF- 25 – 29 May 2026, Bangkok, Thailand

1. Need for interregional IP Network connection
2. Significant progress by SIPG
3. SWIM Indicators were finalized
4. Restructuring of SWIM TF

Conclusion

Key messages



SWIM TF

The main body in APAC Region to support SWIM.

2017-till ..



Need for harmonized implementation

To get benefits, "SWIM for all".

2024-2030

Knowledge sharing is the key...

Is one training per year sufficient?



Need for interregional coordination

Lack of a dedicated body for SWIM in other regions.

2027...

Need for SWIM TF in other regions

HQ is working to establish a body.



Start small, scale with confidence

Collaboration and cooperation among different domains within ANSP and CAA.

Now

All domains are impacted

Paradigm shift.

Thank You

