



ICAO

*International Civil Aviation Organization***The Eighth Meeting of System Wide Information Management Task Force (SWIM TF/8)***Bangkok, Thailand, 08 – 10 November 2023*

Agenda Item 2: Development of Asia/Pacific Regional SWIM Implementation Guidance

PROPOSAL OF TECHNICAL MEMORANDUM OF COOPERATION (TMC) DOCUMENT FOR ATM INFORMATION EXCHANGE THROUGH SWIM

(Presented by MALAYSIA)

SUMMARY

This paper presents the proposal of development of the SWIM Technical Memorandum of Cooperation (SWIM TMC) for ATM Information Exchange using the System Wide Information Management (SWIM) Document. This paper responds to Action Item: SWIM/TF/SIPG/AI-05 from the SWIM Implementation Pioneer Group Meeting which require a draft template for the TMC to be proposed, discussed, and adopted as part of SWIM APAC Implementation Guidance Material.

1. INTRODUCTION

- 1.1 The SWIM Technical Memorandum of Cooperation (SWIM TMC) for ATM Information Exchange using the System Wide Information Management Document is an artefact proposed to be developed to establish the cooperation between two contracting states officially.
- 1.2 Similar TMC documentation has previously been developed and adopted during the implementation of ATN/AMHS in the APAC region which is still being used by states in the APAC region.
- 1.3 As agreed during the SWIM Implementation Pioneer Group Meeting, a similar document should be established to ensure that bilateral cooperation in ATM information exchange between countries through SWIM is appropriately documented and mutually agreed upon.

2. DISCUSSION

- 2.1 ICAO APAC SWIM Task Force has agreed that SWIM will replace the AMHS/AFTN function of ATM information exchange by 2030. To achieve this target, a permanent setup of interconnected SWIM Technical Infrastructure needs to be started by states within the APAC region.
- 2.2 The APAC SWIM Implementation Pioneer Group (SIPG) was established to kick-start this effort and ensure the target can be achieved.

- 2.3 During the first meeting of the SIPG, it was agreed that a Technical Memorandum of Cooperation for the ATM Information Exchange through SWIM need to be drafted, discussed, and adopted by states that wish to participate in the implementation of SWIM. The finalised draft of the TMC shall be part of the APAC SWIM Implementation Guideline material.
- 2.4 Malaysia has undertaken the task in drafting the TMC document and since the implementation of SWIM is nearly similar to the philosophy of the AMHS/ATN implementation, the draft SWIM TMC clauses are drafted based on the AMHS/ATN TMC clauses.
- 2.5 However, the technicality of SWIM implementation is very different compared to AMHS/ATN implementation. Therefore, the following test procedures need to be established to generate supporting information, which will become attachment to the SWIM TMC document. The identified tests are:
- 2.5.1 Network Connectivity Bilateral Test
 - 2.5.2 SWIM EMS Interoperability Test
 - 2.5.3 SWIM Information Service Test
 - 2.5.4 SWIM Application Test
- 2.6 The test procedures shall be created independently from SWIM TMC and shall also become part of APAC SWIM Implementation Guidance Material. The initial draft of the SWIM TMC document is as per **Attachment 1**.
- 2.7 The draft TMC in **Attachment 1** need to be discussed, update and adopted by the meeting as follows:

Draft Decision XX/XX - SWIM Technical Memorandum of Cooperation Document			
What:	The SWIM TMC document need to be discussed and finalized to be adopted by the meeting for it to become APAC SWIM Guidance Material.	Expected impact:	<input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why:	Finalized SWIM TMC document shall be part of APAC SWIM Implementation Guidance Material	Follow-up:	<input type="checkbox"/> Required from States
When:	10-Nov-23	Status:	Draft to be adopted by PIRG
Who:	<input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> CAO HQ <input type="checkbox"/> Other: XXXX		

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
- a) note the information contained in this paper; and
 - b) discuss any relevant matter as appropriate and make decision on further action.

TECHNICAL MEMORANDUM OF COOPERATION

BETWEEN

<ANSP #1>

AND

<ANSP #2>

**FOR AIR TRAFFIC MANAGEMENT (ATM) INFORMATION
SHARING THROUGH SYSTEM WIDE INFORMATION
MANAGEMENT (SWIM)**

[To be filled in (Date of SWIM TMC)]

SWIM TF/8
Attachment to WP/02

Revision History

[illegible]

Table of Contents

TECHNICAL MEMORANDUM OF COOPERATION	1
PARAGRAPH 1 – CITATION	1
PARAGRAPH 2 – PURPOSE.....	1
PARAGRAPH 3 – FINANCIAL TERMS.....	2
PARAGRAPH 4 – SWIM TECHNICAL INFRASTRUCTURE DEFINITION	2
PARAGRAPH 5 – CONTINGENCY ARRANGEMENTS.....	2
PARAGRAPH 6 – SWIM TI TEST	2
PARAGRAPH 7 – UNDERSTANDING	3
PARAGRAPH 8 – REVISION, MODIFICATION AND AMENDMENTS	4
PARAGRAPH 9 – SWIM TI COMMENCEMENT DATE.....	4
PARAGRAPH 10 - SETTLEMENT OF DISPUTE.....	4
PARAGRAPH 11 – CONFIDENTIALITY	4
PARAGRAPH 12 – SUSPENSION	5
PARAGRAPH 13 - EFFECT OF THIS COOPERATION	5
PARAGRAPH 14 - EFFECTIVE DATE, DURATION AND TERMINATION	5
PARAGRAPH 15 - SIGNATURE IN COUNTERPARTS.....	6
PARAGRAPH 16 - AUTHORITY	6

TECHNICAL MEMORANDUM OF COOPERATION

BETWEEN

<ANSP #1>

AND

<ANSP #2>

**FOR AIR TRAFFIC MANAGEMENT (ATM) INFORMATION SHARING
THROUGH SYSTEM WIDE INFORMATION MANAGEMENT (SWIM)**

This Technical Memorandum of Cooperation is made between **<ANSP #1>** and **<ANSP #2>** hereinafter collectively referred to as the “Participants” and singularly as the “Participant”.

WHEREAS the Participants wish to jointly establish an SWIM Technical Infrastructure (“SWIM TI”) connection between **<Country ANSP #1>** and **<Country ANSP #2>** to support the Air Traffic Management (ATM) Information Exchange through the use of International Civil Aviation Organization (“ICAO”) System Wide Information Management (“SWIM”).

AND WHEREAS the Participants have successfully completed the SWIM Technical Infrastructure (SWIM TI) Trial in preparation for a smooth ATM Information Exchange through SWIM implementation.

THE PARTICIPANTS HAVE REACHED THE FOLLOWING UNDERSTANDINGS:

PARAGRAPH 1 – CITATION

This S W I M Technical Memorandum of Cooperation will hereinafter be referred to as the “SWIM TMC”.

PARAGRAPH 2 – PURPOSE

The Participants, agree to establish and implement ATM Information Exchange through SWIM between **<Country ANSP #1>** and **<Country ANSP #2>**, subject to the terms and conditions of this SWIM TMC and the laws, rules, regulations and national policies from time to time in force in their respective States.

PARAGRAPH 3 – FINANCIAL TERMS

Each participant shall be responsible respectively for all costs and expenses arising from the connection from its SWIM Technical Infrastructure (SWIM TI) to the international connection points provided by its telecom carriers and all equipment, software and associated costs required for the ATM Information Exchange operation through SWIM.

PARAGRAPH 4 – SWIM TECHNICAL INFRASTRUCTURE DEFINITION

4.1 The SWIM TI will be based on the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile (EUROCONTROL-SPEC 170 Edition 1.1).

4.2 The network connectivity between Participants SWIM TI will be based on mutually agreed telecommunication provider.

PARAGRAPH 5 – CONTINGENCY ARRANGEMENTS

5.1 The Participants will ensure that fallback procedures in the event of circuit or other failure affecting the flow of network traffic between them are established and supported by their respective alternative setup.

5.2 The Participants will, through regular meetings and other appropriate means, review and exchange information on their respective procedures and the support arrangements and assist each other to strengthen these contingency arrangements.

PARAGRAPH 6 – SWIM TI TEST

6.1 To enable the establishment of the ATM Information Exchange through SWIM under this SWIM TMC, the SWIM TI trial has been conducted to evaluate the basic connectivity, interoperability, functionality, and integrity of the SWIM TI between the Participants.

6.2 The tests conducted under the SWIM TI trial are as follows:

Tests	Test Dates
Network Connectivity Bilateral Tests	[TBD]
SWIM EMS Interoperability Tests	[TBD]
SWIM Information Service Tests	[TBD]
SWIM Application Tests	[TBD]

6.4 The details of the tests and the test procedures for the test cases are set out in **Annex 1**.

6.5 The test results for each of the test cases conducted according to the test procedures in **Annex 1** are recorded and compiled in the test report provided in **Annex 2**.

6.6 The achievements, problems, and lessons learnt from the tests-related activities are also set out in **Annex 2**.

PARAGRAPH 7 – UNDERSTANDING

7.1 The Participants will use all reasonable endeavours to carry out their respective responsibilities and will cooperate to ensure the effectiveness and reliability of the SWIM TI between <Country #1> and <Country #2>.

7.2 In furtherance of this understanding, the Participants will conduct additional tests using additional test cases, if so, agreed by the Participants and subject to paragraph 8 of this SWIM TMC.

7.3 If a Participant assesses that any additional test in sub-paragraph 7.2 or any change in SWIM requirement or service detail is not affordable or not cost effective to implement, that Participant may decline to undertake that additional test or carry out that requirement or service detail but will nevertheless continue to cooperate with the other Participant to reach a mutually acceptable outcome.

PARAGRAPH 8 – REVISION, MODIFICATION AND AMENDMENTS

8.1 No revision, modification, or amendment to this SWIM TMC will be effective unless made in writing and signed by both Participants.

8.2 Such revision, modification or amendment shall come into effect on such date as may be agreed by the Participants and specified in the document made in accordance with sub-paragraph 8.1, taking into consideration all domestic procedures that have to be complied with.

8.3 Any revision, modification or amendment shall not affect the rights and obligations arising from or based on this SWIM TMC prior to the effective date of such amendment.

PARAGRAPH 9 – SWIM TI COMMENCEMENT DATE

The SWIM TI between <Country #1> and <Country #2> under this SWIM TMC will commence one (1) month from the date this SWIM TMC comes into force under paragraph 14.1.

PARAGRAPH 10 - SETTLEMENT OF DISPUTE

Any difference or dispute between the Participants concerning the interpretation and/or implementation and/or application of any of the provisions of this SWIM TMC shall be settled amicably through mutual consultation and/or negotiations between the Participants without reference to any court, international tribunal or other third party for settlement.

PARAGRAPH 11 – CONFIDENTIALITY

11.1 Each Participant undertakes to observe the confidentiality and secrecy of documents, information and other data received or supplied to the other Participant during the period of the implementation of this SWIM TMC or any other arrangements made pursuant to this SWIM TMC. Neither Participant shall disseminate such information to a third party or use this information for any purposes including administrative, editorial, prosecutorial or judicial purposes without the prior written consent of the other Participant.

11.2 Both Participants agree that sub-paragraph 11.1 shall survive the expiry or termination of this SWIM TMC.

PARAGRAPH 12 – SUSPENSION

Each Participant reserves the right for reasons of national security, national interest, public order or public health to suspend temporarily, either in whole or in part, the implementation of this SWIM TMC which suspension shall take effect immediately after written notification has been given to the other Participant.

PARAGRAPH 13 - EFFECT OF THIS COOPERATION

13.1 This SWIM TMC serves only as a record of the Participants' intentions and does not constitute or create, or is not intended to constitute or create, legally binding rights or obligations under domestic or international law and will not give rise to any legal process and will not be deemed to constitute or create any legally binding or enforceable obligations, express or implied.

13.2 Notwithstanding anything in sub-paragraph 13.1, paragraph 3 (Financial Terms), paragraph 8 (Revision, Modification and Amendment), paragraph 10 (Settlement of Disputes), paragraph 11 (Confidentiality) and paragraph 12 (Suspension) shall be binding on the Participants.

PARAGRAPH 14 - EFFECTIVE DATE, DURATION AND TERMINATION

14.1 This SWIM TMC will come into effect on the date of last signature by both Participants and will continue to have effect for a period of five (5) years.

14.2 Thereafter, this SWIM TMC may be extended by mutual agreement of the Participants made in writing in accordance with paragraph 8.

14.3 Notwithstanding anything in this paragraph, either Participant may terminate this SWIM TMC by giving no less than sixty (60) days' prior written notice to the other Participant.

14.4 Any termination of this SWIM TMC will not affect the implementation of on-going projects and/or programmes, which have been agreed upon by the Parties prior to the effective date of the termination of this SWIM TMC.

PARAGRAPH 15 - SIGNATURE IN COUNTERPARTS

To facilitate execution, this SWIM TMC and each of its annexes and addenda, if any, may be executed in counterparts, each of which will be an original, but all of which together will constitute one and the same agreement.

PARAGRAPH 16 - AUTHORITY

The Participants agree to the provisions of this SWIM TMC as indicated by the signatures of their duly authorised representatives below.

The foregoing record represents the understandings reached between the <ANSP #1> and the <ANSP #2> upon the matters referred to therein.

Signed by the Participants' duly authorised representatives on the dates set out below in two (2) original texts in the English language.

**<ANSP #1> Authorised
Representative**

**<ANSP #2> Authorised
Representative**

Name
Designation

Name
Designation

Date:

Date:

ANNEX 1: DETAILS OF THE TESTS AND THE TEST PROCEDURES

ANNEX 2: THE TESTS RESULT