International Civil Aviation Organization

ICAO

Workshop and One Day PSIDS meeting for preparation of new-CRV requirements and specifications for future SWIM/other aviation services
Guam, USA, 17-20 September 2024

Agenda Item 5:   Regional SWIM and implementation plan

REGIONAL SWIM AND IMPLEMENTATION PLAN
(Presented by SIPG)

SUMMARY

This paper will present the plan created by the SIPG to implement the Regional SWIM as well as the timeline for implementation.

1.   Introduction

1.1   The SWIM Implementation Pioneer Group was proposed and formed at the 7th meeting of the SWIM Task Force (SWIM TF/7).

1.2   The terms of reference as presented in flimsy 02 (SWIM TF/7 – Flimsy 02) states that the first deliverable of the SIPG is to build a SWIM Technical Infrastructure prototype according to the architecture as decided by the SWIM task force using the CRV as the IP based network.

1.3   As a result of supporting the SWIM over CRV demonstration and the surveillance sharing over SWIM technical trial, the SIPG has developed a high-level implementation plan for the regional SWIM.

2.   Discussion

2.1   At the 14th meeting of the SIPG, 10 work items were identified for further development and /or testing to support the implementation of the regional SWIM. They are as follows:

a) Performance Metrics
b) SWIM Architecture
c) REST services
d) SWIM Registry
e) Standardized Nomenclature
f) AMHS / AFTN Migration Plan
g) AMHS / AFTN Data Translation
h) Security
i) Information Services Implementation

j) Conditions for SWIM Operationalization

2.2 The work items were divided into 2 categories as shown in the table below. Policy type work items refer to those work items that will need discussion and deliberation to arrive at a consensus of how these work items are to be implemented. Construction type work items are those work items that need actual building of software, networks and / or networking infrastructure to complete them.

2.3 The columns in the table below are independent of each other, meaning that there is no relationship between items in the same row. The table is simply a collection of work items into 2 categories.

Policy Type Work Items	Construction Type Work Items
Performance Metrics	SWIM Architecture
SWIM Architecture	REST Type Services
AMHS / AFTN migration Plan	Registry
Standardize Nomenclature	AMHS / AFTN Data Translation
AMHS / AFTN Data Translation	Security
Security	Information Services Implementation
Conditions of SWIM Operationalization	

Note that a few work items are listed in both categories. These work items need both policy and construction work to be done.

2.4 The SIPG is planning to conduct 2 Technical Interchange Meetings (TIMs) to conclude on the policy type work items. The first TIM is targeted to happen between November 2024 to February 2025. The second TIM is targeted to happen after June 2025.

2.5 The construction type work items are planned to be concluded based on the following timeline:

Time Frame	Work Item
October 2024	Registry – Implement SWIM Discovery Service (SDS

November 2024	REST Type services – Trial simple REST services on current SWIM prototype
December 2024	Registry – Interconnecting between SDS
February 2025 – May 2025	SWIM Architecture – start implementation of the SWIM architecture decided during TIM 1 Security – start implementation of security measures decided at TIM 1 AMHS / AFTN Translation – Implementation of a trial AMHS / AFTN gateway Information Services – Implementation of some common information services as agreed by the SWIM Task Force
June 2025 – December 2025	Security – Testing to see if the implementation meets requirements Security – Upgrade security implementation to conform with guideline from the Trust Framework Panel if ready SWIM Architecture – Testing to see if the issues discovered during the Joint Event are addressed. REST Type Services – Implementation of request/reply type information services using REST.
2026	Testing of the SWIM according to the criteria and conditions set by the SWIM Task Force in preparation to migration into operations.

2.6   Note that the above timeline is still a broad high-level planning timeline. The objective is to achieve SWIM implementation by 2026 on the operational CRV, however there could be further issues and questions that become evident as we progress that could move the timeline further out.

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

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