



ICAO

*International Civil Aviation Organization***The Fifth Meeting of System Wide Information Management Task Force (SWIM TF/5)**

Video Tele-conference, 9 – 11 August 2021.

**Agenda Item 8:** Review SWIM Task Force ToR, Programme, and Outstanding Action Items**APAC SWIM PROFILE DISCUSSION**

(Presented by Australia)

**SUMMARY**

This paper presents a discussion and options for the development of an APAC SWIM Technical Infrastructure Profile.

**1. INTRODUCTION**

- 1.1 A key aspect for regional (and global) interoperability for SWIM is to define the Technical Infrastructure Profile for the participating stakeholders. This SWIM Profile outlines the specific technical capabilities that will be used to support interoperable and secure information exchange.
- 1.2 At SWIM TF/4, Australia proposed that there should be an APAC regional approach to the development of a common SWIM Profile. See paper here: [https://www.icao.int/APAC/Meetings/2020%20SWIM%20TF4/IP04\\_AUS%20AI.7%20Australian%20Report-V02.pdf](https://www.icao.int/APAC/Meetings/2020%20SWIM%20TF4/IP04_AUS%20AI.7%20Australian%20Report-V02.pdf)
- 1.3 This paper further details thoughts and options related to this proposal as response to TF Action# 4-13.

**2. DISCUSSION**

- 2.1 For SWIM to be successful, decisions need to be made on the technical footprint available to service providers. The greater the technical footprint (ie scope of technology choices) the more participation is possible but at higher costs to support wider interoperability. Regional consensus will need to be achieved to meet the right balance as well as position the Profile with open modern technologies with a future path.
- 2.2 In addition, more than one SWIM Profile can be developed that target specific business use cases that need to support and meet specific (regulatory) requirements. For example, a Profile targeted at open access to data, one for targeted controlled access, and one for ground-to-air use.
- 2.3 Currently, there are a number of Profiles in use (or defined) for SWIM (globally). The most famous SWIM Profile is the EUROCONTROL Yellow Profile available at: [https://www.eurocontrol.int/archive\\_download/all/node/10691](https://www.eurocontrol.int/archive_download/all/node/10691)

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2.4 The core areas covered in a SWIM Profile address the technology options for Interface Bindings (including the message protocol, exchange patterns, and transport services) and Security (including identity/authentication, encryption, and auditing services).

2.5 Typical examples for Interface Bindings may include REST API and AMQP protocols, Query/Response and Publish/Subscribe patterns, and HTTP transport. Typical examples for Security may include OAuth2/OpenID for authentication, and TLS for encryption.

2.6 Network level options are not typically part of a SWIM Profile as the assumption in the ICAO SWIM Concept document is the use of the open internet. However, some Profiles may choose to include this layer for certain business use cases requiring alternate security postures.

2.7 Note: The message payload (eg using AIXM, FIXM, IWXXM etc) is not in scope for a SWIM Profile. A SWIM Registry is also not in scope of a SWIM Profile.

**Questions for the APAC SWIM T/F**

2.8 Does the APAC SWIM T/F see the benefit in defining a SWIM Profile for the APAC Region stakeholders? (The alternative is to simply allow individual States to define their own specific set of Profile choices for interoperability between themselves.)

2.9 Are there alternative options instead of defining an APAC SWIM Profile?

2.10 How should an APAC SWIM Profile be developed? What process should be followed? Which Task Group should take the responsibility? What timeline should be proposed/expected (to meet ICAO ASBUs)?

2.11 Should the APAC SWIM Profile be a single Profile with multiple “levels” of increasing conformance? Or should there be multiple (independent) APAC SWIM Profiles for different business use cases?

2.12 Should the APAC SWIM Profile(s) be mandatory for all SWIM data services in the region?

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss and conclude the question outlined in 2.8 in detail,
- c) if “no” then consider the question outlined in 2.9,
- d) if “yes” then consider and discuss the questions outlined in 2.10, 2.11, and 2.12, and
- e) determine the next steps including the creation of an ad-hoc group to formulate a proposal for an APAC SWIM Profile.

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