



ICAO

**The Fourth Meeting of System Wide Information Management Task Force (SWIM TF/4)**

Web-conference, 3 – 6 November 2020

**Agenda Item 4: Review SWIM Task Force Programme and outstanding action items****REVIEW PROGRAMME AND OUTSTANDING ACTION ITEMS**

(Presented by the Secretariat)

**SUMMARY**

This paper presents the development of SWIM TF's work plan and the updating of Action List with highlight on the restructure of the task assignment and numbering.

**1. INTRODUCTION**

1.1 The 20<sup>th</sup> Meeting of the Communications, Navigation and Surveillance Sub-Group of APANPIRG (CNS SG/20) was held in Bangkok, Thailand, from 11 to 15 July 2016, through **Decision CNS SG/20 – D3: Establishment of SWIM Task Force**, SWIM Task Force was established.

1.2 The First Meeting of the APAC SWIM Task Force (SWIM TF/1) was held at the ICAO Asia-Pacific Regional Office, Bangkok, Thailand, from 10 to 12 May 2017. The Second Meeting of the APAC SWIM Task Force (SWIM TF/2) was held at the ICAO Asia-Pacific Regional Office, Bangkok, Thailand, from 09 to 12 April 2018. The Third Meeting of the APAC SWIM Task Force (SWIM TF/3) was held at the ICAO Asia-Pacific Regional Office, Bangkok, Thailand, from 07 to 10 May 2019.

**2. DISCUSSION**

2.1 The SWIM TF/1 meeting agreed on the work plan for the task force, which outlined the phased approach for SWIM implementation in APAC region, and assigned various tasks to task leads and contributors. The meeting also summarized action items arisen during discussion into an Action List.

2.2 The SWIM TF/2 and SWIM TF/3 meetings further reviewed the work plan under Agenda Item *Review SWIM task force programme*. The meetings also updated the Action List to reflect the progress in the past year and plan for the near future. The task force work plan is provided in **Appendix A** to this paper, and the Action List from SWIM TF/3 is provided in **Appendix B** to this paper.

2.3 As an established effective practice in progressing various tasks of the APAC SWIM TF, online Task Leads (TLs) coordination meetings have been organized from time to time between Task Force meetings. The 7th Task Leaders Coordination Meeting (teleconference) of the SWIM Task Force was held on the 10th of July 2019 and a task update was proposed with new structure and arrangement for various tasks originally agreed by SWIM TF/1.

**Agenda Item 4**

03 – 06/11/20

2.4 The Task Update Proposal from Secretariat is displayed in *Table 1* as below:

*Table 1. Proposed Task Groups and Leads*

<b>Groups</b>	<b>Task No.</b>	<b>Subject/Task</b>	<b>Task Leads</b>
Implementation Planning	1	Regional implementation philosophy & roadmap	David Leow (Singapore) & Amornrat Jirattigalachote (Thailand)
SWIM Infrastructure	2	Regional SWIM infrastructure	Xiaodong Lu (Japan)
Technical Architecture	3	Development and maintenance of regional information exchange models	Amornrat Jirattigalachote (Thailand)
Governance	4	Registry - implementation guidance for Interoperable Registry Model	Kang Jiseok (ROK)
	5	Cyber security	Hannah Hong (China)
	6	Other governance policies	Mark Kaplun (USA)
Information Services	7	Information services	Jay Zimmer (USA) & Marco Kok (Hong Kong, China)
Validation & Demonstration	8	SWIM ASEAN Demonstration	David Leow (Singapore) & Amornrat Jirattigalachote (Thailand)
	9	SWIM services and application test and validation	Gao Honglei (China), Xiaodong Lu (Japan), Kang Jiseok (ROK)
Coordination and Promotion	10	Monitoring of Panels' work	Yukinobu Ryu (Japan)
	11	Regional coordination and SWIM related information sharing	John Moore (IATA)
	12	SWIM implementation education and promotion	Hannah Hong (China)

2.5 With the additional discussion through various Task Leaders Coordination Meetings (teleconference) held in 2020, the proposed task update was revised and shown in Table 2.

Table 2. Revised Task Group

Groups	Task No.	Subject/Task	Task Leads
Implementation Planning	1	Regional implementation philosophy & roadmap (combined previous Task 1-1 and Task 1-2)	David Leow (Singapore) & Amornrat Jirattigalachote (Thailand)
SWIM infrastructure	2	Regional SWIM infrastructure (previous Task 1-8)	Xiaodong Lu (Japan), Yukinobu Ryu (Japan), Henry Chan (Hong Kong, China)
	3	Security service (New task)	Hannah Hong (China) & Joe Jones (USA)
Technical Architecture	4	Development and maintenance of regional information exchange models (previous Task 1-6)	Amornrat Jirattigalachote (Thailand) & Wen Zhu (USA)
Governance	5	Governance (Policies and Procedures) (combined previous Task 1-4, Task 1-5, Task 2-1-2, Task 2-1-4)	Jiseok Kang (ROK), Mark Kaplun (USA), Yukinobu Ryu (Japan), Xiaodong Lu (Japan), Honglei Gao (China)
Information Services	6	Information services (previous Task 1-2)	Joe Jones (USA) & Marco Kok (Hong Kong, China)
Validation & Demonstration	7	SWIM in ASEAN Demonstration (previous Task 2-1-1)	David Leow (Singapore) & Amornrat Jirattigalachote (Thailand)
	8	SWIM services and application validation (previous Task 2-1-3)	Yukinobu Ryu (Japan), Xiaodong Lu (Japan), Honglei Gao (China), Jiseok Kang (ROK)
Coordination and Promotion	9	Monitoring of Panels' work (previous Task 1-7)	Yukinobu Ryu (Japan)
	10	Regional coordination and SWIM-related information sharing (previous Task 1-3)	John Moore (IATA)
	11	SWIM implementation education and promotion (New task)	Hannah Hong (China)

2.6 The meeting was informed that the proposed Task Update would better align the achievements from various tasks with the global guidance and regional implementation materials and eliminate unnecessary duplication in the previous work plan.

2.7 With the revised Task Group aforementioned, the provisional agenda of this meeting (*refer to WP/01*) was developed after further discussions in the subsequent TLs meetings.

**3. ACTION BY THE MEETING**

3.1 The Meeting is invited to:

- a) note the information contained in this Paper;
- b) consider any amendment, if deemed necessary, to the Work Plan/Programme and Action List before adopting as the Conclusion of the SWIM TF/4 meeting; and
- c) discuss any relevant matter as appropriate.

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Project	Task number	Task	Planned Start	Planned completion	Dependencies	Guidance for SOW	SOW (reference)	Task Lead(s)
SWIM - Definition phase	1-1	Benchmarking of best practices	2017	2018	SWIM Task Force created, resources available Panels deliver as expected Task 1.7 (common vocabulary)	Benchmark existing governance models (FAA, Europe), existing catalogues, existing arrangements for quality of service/SLA (availability/reliability), existing registries if any Benchmark mediation of legacy users Benchmark available existing SWIM and industry models for service descriptions ICCAIA IP13 to be included	1-1 Benchmarking - SOW	David J. Almeida (USA)
		Guidance to States: Interregional workshop Develop SWIM implementation guidance for phase 1 Develop SWIM implementation guidance for phase 2 (dual operations) Regional workshops	2017 2017 2017 2019	2022 2017 2018 2020	As needed	From the task 1-3 APANPIRG WG/TF planning to use or using SWIM may need guidance (ad hoc basis) Guidance to States Mediation of legacy users Lessons learnt from ASEAN SWIM demonstration		
		Guidance for publishers/consumers;	2017	2018	Task 1.1 Task 1-5 and 1-6 Task 1-4 (service descriptions)	Common vocabulary requirement on publishers and subscribers to use the common controlled vocabulary Should include developing a guide for the preparation of service descriptions (dependency = 1.4) Could include guidance for developers/publishers on a set of protocols/formats to use See WP/5 appendices b and c for FAA guidance Analyse which guidance is necessary from IP/6 and WP/6		
		SWIM Regional roadmap	2017 2018	2018 2022	SWIM Manual 10039 and Technical Manual	Initial Roadmap should be developed in alignment with Seamless ATM plan objectives - realistic timelines Can be a simple excel files recording all States intentions, revised intentions, and actual achievements SOW should address how and when to maintain roadmap Good mix of participants is required ICCAIA IP13 to be included Include in the roadmap the target dates for IWXXM (2018 recommendation METAR, TAF, Volc Ash, SIGMET, AIRMET --- and possibly a standard for 2020)		
	1-3	Regional coordination within APAC and guidance and training to APANPIRG bodies	2016	2022	SWIM Manual and Technical Manual Guidance on IWXXM	Use APANPIRG organizational chart Revise on an annual basis Establish simple "MOU" between concerned APANPIRG bodies	1-3 Regional Coordination - SOW_v0.1	John Moore (IATA)
		Guidance and training to APANPIRG WG/TF : - Provide guidance to APANPIRG WG/TF using SWIM	2017 2017 2019	2022 2017 2018 2020	As needed	From the task 1-3 APANPIRG WG/TF planning to use or using SWIM may need guidance (ad hoc basis) Guidance to States Mediation of legacy users Lessons learnt from ASEAN SWIM demonstration		
	1-4	SWIM governance	2018	2022	SWIM Manual and Technical Manual draft SARPS (stable and mature) lessons learnt from existing governance models (FAA, Europe)	Should include all stakeholders in APAC Should identify SARPS and guidance issued by IMP/ATMRPP/METP Strong coordination required with 1.5 WPO4 recommends two service Description models - task 1.4 to study options Version management should address backward compatibility and the content of models (FIXM, AXIM) possibility to operate PKI through the CRV service provider to be further explored	1-4 SWIM Governance - SOW_updated_fri	David Wills (New Zealand) for SWIM TF/1 and Mark Kaplun (USA) from SWIM TF/2
	1-5	Design Regional SWIM Registry and architecture for phase 2	2017	2019	SWIM ConOps and Technical Manual Overall requirements: Refer 2.5.4 of DOC 10039	Should take into account how to efficiently implement 2.5.4 of DOC 10039. Search, access, discovery features Should include access control and search functionalities. Chapter 3.5 SWIM Registry For architecture should take into account CRV and that there is no central operational entity in APAC to run common services Input paper about service description (FAA) Strong coordination required with 1-4 3 approaches proposed in WPO7, not exclusive Not forget access to registries outside APAC Confirm if the option of PKI is suitable If yes coordinate with CRV OG to seek if PKI services provided by CRV provider would be a suitable option possibility to operate PKI through the CRV service provider to be further explored Consider SWIM architecture principles from IP02	1-5 SWIM Registry - SOW	Kang Jiseok (ROK) and David Leow (Singapore)
	1-6	Regional SWIM models	2016	2017	Global model definitions available	From the task 1-3 models may need extension /refinements - there is already a case for ATFM interaction with "light" approach discussed by IMP, coordination with 1-7 Relation with CCB - coordination with task 1-4	1-6 SWIM Regional Models - SOW_TF1_Av2	Amornrat Jirattigalochote (Thailand)
	1-7	Monitoring of panels work	2016	2022	SWIM Manual and Technical Manual	Escalate issues to the panels Report back from panels 2 IMP meetings per year, monthly conferences A need for a Discussion paper at IMP (deliverable of the task) Focal point for common controlled vocabulary, in coordination with 1-4 Version management should be coordinated regarding backward compatibility and the content of models (FIXM, AXIM) Focal point to trigger change requests to the models	1-7 Monitoring Panels - SOW	Yukinobu Ryu (Japan)
SWIM Implementation Phase 1 - initial expansion of services and preparation of phase 2	2-1-1	Promote new needs and new services and maintain database of publishers; (ID/access points/s)	2017	2019		An "Excel" file? Include service descriptions etc Assume registry services can be available on CRV from 2019 onwards 70 FAA applications are available for use and should be referenced in the catalogue	2-1-1 SWIM IMP Phase 1 - SOW_v1	Marco Mang Hin Kok (Hong Kong China)
	2-1-2	Implement SWIM registry and architecture	2019	2022	Task 1-5 completed CRV implemented	Assume registry services can be available on CRV from 2019 onwards Design and implement a mediation service (see SWIM TF-1, WPO5)	2-1-2 SWIM Registry - SOW	David Leow (Singapore)
	2-1-3	Support validation and publication of SWIM based applications	2017	2019	Availability of SWIM applications (task 2-1-2) SWIM registry and architecture (DNS service, security, etc) (task 2-1-4) Procedures/SLA: Task 1-4 Models: 1-6	SARPS and guidance Envisage a regional validation as a final step - see report of SWIM TF-1 for large scale tabletop exercise	2-1-3 SWIM IMP Phase 1 - SOW_v1	Xiaodong Lu (Japan), Gao Honglei (China) and Jiseok Kang (Republic of Korea)
SWIM Implementation Phase 2 - generalization	2-2-1	SWIM generalization	2022	2025	SWIM Manual and Technical Manual National transition roadmaps Task 2-1-2 Task 2-1-3 Task 2-1-1	Populate registry (2-1-2) using catalogue (2-1-1), and maintain it Task systematic cross-validation of new services using testbeds from 2-1-3 Optimize architecture on CRV (DNS, proxies) Assist States in their transition to full SWIM Assist States with LOA and guidance (1-1)	SOW to be drafted later on	TBD later on
	2-2-2	Facilitate dual operations	2022	2025		Operate a mediation service (see SWIM TF-1, WPO5) until all states have transitioned to SWIM (2-2-1)	SOW to be drafted later on	TBD later on

SWIM TF/3  
Appendix A to the Report

Action ID	Reference	Who	What	Due date	Status	Comment
1-1	2.2.1 & 2.2.2	Jeri Groce (Chair), Secretariat	Introduce the mediation principle in the design of the SWIM transition	TBD	Open	This will be assigned to the eventual lead of 2.2.1.
1-4	1.4 & 1.1	Le Thi Phuong, (David Almeida)	Contribute to Task 1-1 regarding the benchmarking of quality and verification process, Service Level Agreements (SLA)	TBD	Open	Dependent on Task 1.1 Work Plan. David Almeida will reach out to Member of Viet Nam to establish schedule.
1-5	1.5 & 2.1.1	Jiseok Kang	Define the minimum set of information and basic function of APAC SWIM registry	30-Nov-2018	Open	<p>This activity must be aligned to the SARPS, PANS and guidance defined by the IMP.</p> <p>This activity needs a coordination with Task 2-1-1 to define service description elements for APAC SWIM services</p> <p>1.While we are looking forward to getting more guidance from IMP PANS, SARPS, the IMP is also wish to get more input on SWIM implementation from regional office while they are developing these two documents. So I suggest APAC SWIM TF should work in parallel, working on researching the policy of registry, in the meantime paying attention to the progress of IMP's developing PANS and SARPS of. I think it will be helpful to IMP and APAC SWIM implementation.</p> <p>2.The core editorial team of PANS-IM has invited" Yukinobu Ryu, David Leow and Han Hong ( Hannah) to join the Vol.II editorial team with the objective to use their insights for verifying whether current draft Vol.II fulfills the requirements of the users,</p>
1-6	1.4	Mark Kaplun and David Wills	Embark requirements laid out in ICAO provisions and FAA best practices and other practices as available to define the SWIM security governance	30-Apr-2019	Open	<p>There is interest in establishing a security task to discuss the crosscutting SWIM issues, perhaps this should be a separate task as ICAO moving toward global trust security networks</p> <p>The due date will be pushed to April 2019 for the next plenary meeting</p> <p>The secretariat will add an agenda item to the next plenary for "splitting out security from governance into its own task"</p>
1-7	1.1	David Almeida and Edward Curtis	Introduce lessons learnt from ICCAIA in the benchmark	27-May-2018	Open	Dependent on Task 1.1 Work Plan. To be addressed after TF/3

SWIM TF/3  
Appendix A to the Report

Action ID	Reference	Who	What	Due date	Status	Comment
1-8	2.1.3	Xiaodong Lu	Plan a large scale tabletop exercise and message exchange demonstration in the mid-term (2019 or 2020)	30-Nov-2018	Open	There are currently two tasks – the ASEAN SWIM demo and FF-ICE/2 validation task. This task is reliant upon coordination with those 2 tasks. The due date will be pushed to November 2018 to allow time for FAA and ASEAN to make decisions Working on tabletop between Japan, Korea, and China. Will discuss this issue at TF/3
1-12	1.2 & 2.1.1	Amo, David Leow, Marco Kok	Align interdependencies between Task 1.2 and 2.1.1.	30-Apr-2018	Open	Artifacts of 2.1.1 can support 1.2. Will discuss at the October Brussels meeting.
1-13	1.5	Jiseok Kang	Develop Working Paper for APAC SWIM registry approach	31-Dec-2018	Open	This action is dependent on action item ID# 1-5 to finish before work can begin
1-16	1.2	Marco Kok, and John Moore	Develop plan for development of a data catalog for Aeronautical, Flight, and Weather data	30-Nov-2018	Open	A request for assistance from subject matter experts in the domain areas of Aeronautical, Flight, and Weather data has been made by action owner Marco Kok. Work still ongoing, coordinating with Amo, referring to data catalogue prepared by Aerothai. Working on finalizing flight data catalogue
1-18	Work Plan	Shane Sumner	Coordinate with Stephan Dubet who is developing the ICAO IMP SWIM Governance document	On-Going	Open	<ul style="list-style-type: none"> <li>• Shane will coordinate and prepare a paper.</li> <li>• Deliverable date is on-going.</li> <li>• Initial deliverable date will be the week of the plenary.</li> </ul>
1-24	Action Item 1-16	APAC Task Force Leadership	APAC Task Force Leadership to support Marco Kok, and John More on Action Item 1-16.	9-Apr-2018	Open	Amo: The AeroThai group have already developed an initial data catalogue and will provide to Mr. Kok. Shane: May be able to provide input into this activity as well.
2-4	1.1	David Almeida, Jay Zimmer	Make recommendations on the APAC Region applicability of items in SWIM TF/2 WP/4	30-Apr-2019	Open	XM recommendations will continue to be addressed as needed
2-5	1.3	John Moore	Coordinate SWIM TF and MET IE/WG outcomes and activities This action is really about broader coordination of SWIM activities in APAC (not solely MET) and raising awareness of the work of the SWIM Task Force.	31-Dec-2019	Open	WP09 SWIM in ASEAN Demonstration presented at ICAO APA-CDM TF/3
2-7	1.4	David Willis, Mark Kaplun	Examine CRV OG to determine what structure may be used to form an APAC Regional SWIM Governance Review Board		Open	Task will be left as is until more clarification from Wen Zhu

SWIM TF/3  
Appendix A to the Report

Action ID	Reference	Who	What	Due date	Status	Comment
2-8	1.4	David Willis, Mark Kaplun	SWIM in ASEAN Demonstration participant Administrations to share any lessons learned or other insights relating to SWIM governance	30-Nov-2019	Open	This task's due date will be scheduled for a few months after the ASEAN SWIM demo to obtain their lessons learned, demo date 27/6/19.
2-11	1.8	Yunkinobu Ryu, Xiaodong Lu	Investigate the role of CRV in APAC SWIM and make recommendations on how APAC SWIM will interconnect with the CRV	30-Apr-2019	Open	There are two options to establish SWIM platform on CRV. Confirms details of CRV and IMP to consider how to implement this method of the regional CRV. Xiaodong Lu will give a report about this in next SWIM TF meeting in 2019
2-14	1.1	David Almeida, Jay Zimmer, Hannah Hong	Develop an APAC SWIM education implementation plan and high level education materials	30-Apr-2019	Open	<p>_The SWIM education video for those with technical background has been finished which will be published on APAC website in March.</p> <p>_The SWIM brochure has been in the final stage for design and will be completed in April.</p> <p>_The SWIM education implementation plan draft was presented at TF/3 wil continue to be developed</p>
2-19	Action Item 2-14	All	All states are encouraged to provide more SWIM education materials		Open	
2-20	1.4	Wen Zhu, Mark Kaplun, David Leow, and David Almeida	Discuss and draft a proposal to the chair and try to get clarification on deliverables 1.4		Open	
2-21	1.8	David Leow and Amornrat Jirattigalochote	Provide all ASEAN SWIM Demo lessons learned and each subtask can absorb the lessons applicable to that group.	30-Nov-2019	Open	To be addressed after demonstration
2-22	2.1.4	Xiaodong Lu	Send an email to Kang Jiseok and Shane Sumner to resolve the discussion if task 2.1.4 should be included in the SWIM Registry/Architecture task		Open	
3-1		Task leads	The Task Leads will address the APAC SWIM Implementation Materials Table of Contents of the at the next quarterly Task Force Lead Teleconference and provide input of supplementary materials by SWIM TF/4	30-Apr-2020	Open	
3-2	1.3	Wen Zhu	Set up dedicated working group to covers other areas of cybersecurity	30-Apr-2020	Open	
3-3	1.6	Amornrat Jirattigalochote	The APAC SWIM FIXM Extension be forwarded to the FIXM Change Control Board (CCB) for validation and publication on the FIXM official website	30-Apr-2020	Open	
3-4	1.7	Task Force members	SWIMTF members to submit comments to Japanese IMP member, Yukinobu Ryu	20-May-2019	Open	
		Tasf Force members	SWIMTF to review Table of Contents for APAC SWIM Eductation programme (Appendix F to the SWIMTF/3 meeting report)	30-Jun-2019	Open	