



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE**

**REPORT
OF
THE THIRD MEETING OF THE SURVEILLANCE STUDY GROUP
(SURSG/3)**

Hong Kong China
(22 to March 24 2023)

The views expressed in this Report should be taken as those of
the Meeting and not the Organization.

Approved by the Meeting
And published by the ICAO Asia and Pacific Office, Bangkok

HISTORY OF THE MEETING

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1. Introduction

1.1 The Third Meeting of the Surveillance Study Group (SURSG/3) was held in Hong Kong, China, with the hybrid option (In-Person and Virtual Participation) from *22 to 24 March 2023*.

2. Attendance

2.1 The Meeting was attended by **102** participants (25 In-Person and 77 Virtual) from **14** States/Administrations, **2** International Organizations, and **3** industry partners including Cambodia, China, Hong Kong China, Fiji, Indonesia, Malaysia, Pakistan, the Philippines, the Republic of Korea, Singapore, Sri Lanka, Thailand, United States, Viet Nam, IATA, Frequentis, PCCW Global (PCCWG), Thales and ICAO. The List of Participants is provided in **Attachment 1**.

3. Opening of the Meeting

3.1 On behalf of the Hong Kong Civil Aviation Department (HKCAD), Mr. M H Hui, Assistant Director-General of Civil Aviation (Air Traffic Engineering Services) inaugurated the Meeting. Mr. Hui welcomed all delegates and informed them about the planned visits to HKCAD's new Control Tower Simulator and Digital Tower Facilities in the CAD Headquarters apart from the discussion on proposed agenda items. In closing, Mr. Hui wished the participants a successful and fruitful Meeting, which would also foster closer collaboration and cooperation among Member States and participants in carrying out the works and achieving the objectives of SURSG.

3.2 Mr. Vincent Wong, Acting Chief Electronics Engineer of the Air Traffic Engineering Services Division of the Hong Kong Civil Aviation Department (HKCAD), Chair of SURSG, shared his appreciation to the study group for the completion of various tasks as per the timelines. He attributed the progress made by the SURSG to the support from all volunteer members and expressed his hope that the group would continue to support the common goal of sharing surveillance for the benefit of the aviation community and for promoting SWIM.

3.3 For the ICAO Asia/Pacific (APAC) Office, Ms. Soniya Nibhani, Regional Officer ANS (CNS) Implementation, shared her appreciation to the HKCAD for hosting the SURSG/3 Meeting. She informed SURSG/3 was the first APAC CNS Meeting hosted by any State after 2020. She appreciated the tremendous efforts of HK China in organizing the Meeting and wished for the continued support of Hong Kong China in ICAO APAC activities.

4. Officers and Secretariat

4.1 Mr. Vincent Wong, Acting Chief Electronics Engineer of the Air Traffic Engineering Services Division of the Hong Kong Civil Aviation Department (HKCAD), chaired the Meeting.

4.2 Ms. Soniya Nibhani, Regional Officer ANS (CNS) Implementation, acted as the Secretary of the Meeting with the support of Ms. Zhong Wenhan, Regional Officer CNS, and Ms. Varapan Meefuengsart, the Programme Assistant from ICAO Asia and Pacific Regional Office.

5. Organization, Working Arrangements, and Language

5.1 The Meeting met as a single body, and the working language was English, including all documentation and this Report. A total of **Twelve** (12) Working Papers (WPs), **Two** (2) Information

Papers (IPs), and **One** (1) Presentation were considered by the Meeting. A List of Working Papers, Information Papers, and Presentations is provided in **Attachment 2**.

6. Conclusions/Decisions - Definition

6.1 The CRV OG of APANPIRG records its actions in the form of Draft Conclusions, Draft Decisions, and Decisions with the following significance:

- a) **Draft Conclusions** deal with matters which, in accordance with the Sub-Group's Terms of Reference, require the attention of States/Organization or actions by ICAO in accordance with established procedures;
 - b) **Draft Decisions** relate solely to matters dealing with the internal working arrangements of APANPIRG and its contributory bodies; and
 - c) **Decisions** relate solely to matters dealing with the internal working arrangement of the CRV OG.
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Agenda Item 1: Adoption of Agenda

Provisional Agenda - Sec (WP/01)

- 1.1 The tentative agenda items presented in **WP/01** were adopted by the Meeting.

Agenda Item 2: Review of the outcome of relevant Meetings

Review of Relevant Meetings - Sec (WP/02)

2.1 The paper summarized relevant information and updates highlighting the outcomes of the thirty third Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/33), the twenty sixth meeting of Communication, Navigation, and Surveillance Sub Group (CNS SG/26), the Second Meeting of the Surveillance Study Group (SURSG/2), the Sixth Meeting of the APAC SWIM Task Force (SWIM TF/6) and the Seventh Meeting of the Surveillance Implementation Coordination Group (SURICG/7).

2.2 The CNS SG/26 Meeting adopted **Five (5)** Conclusions and **Two (2)** Decisions. In addition, based on the outcome of discussions on various agenda items, the CNS SG/26 Meeting developed **Five (5)** Draft Conclusions and **One (1)** Draft Decision for consideration by the APANPIRG/33, which was adopted by the APANPIRG/33 Meeting. The Meeting noted the Conclusions/Decisions adopted by the CNS SG/26 and the APANPIRG/33 and discussed the follow-up.

Outcomes of CRV OG/11 Meeting – Sec (WP/03)

2.3 The paper summarized relevant information and updates on the outcomes of the Eleventh Meeting of the Common aeRONautical Virtual Private Network Operations Group of APANPIRG (CRV OG/11), held from 1 to 3 February 2023 in ICAO Asia and Pacific Regional Office, Bangkok, Thailand.

Agenda Item 3: Progress update of SURSG tasks under the work plan

Review of Work Plan for Surveillance Study Group - Hong Kong China (WP/11)

3.1 The paper reviewed and shared recommendations on the Surveillance Study Group Work Plan in view of the progress and development following SURSG/2 held in March 2022. Considering the planned Joint Event for Surveillance Data Sharing in the SWIM Trial and SWIM Over CRV Demonstration (Demo) and the progress of the current Work Plan, the Meeting reviewed the changes proposed to Items 3-2, 4, 4-1 & 4.2 of the Work Plan. It was suggested to have Item 3-2 incorporated into Item 4 (and sub-items) and adjust the delivery timing for Item 4 and sub-items based on the Demo outcomes. It was proposed that instead of preparing draft multilateral agreements on surveillance sharing as originally worded in the work plan, the guidance material (i.e. Item 4 and sub-items) could include a list of recommendations on the various technical and operational elements of sharing surveillance to be factored into such an agreement where feasible. SURSG Chair requested Meeting to provide support and participate in the Trial.

3.2 In accordance with the proposed and agreed changes in WP/11, it was discussed and agreed that description of Task 4 (on Guidance Material) would be elaborated to include the incorporation of a section of technical and operational considerations as reference for the preparation of multilateral agreement for states/parties intending to share surveillance data and the elaborated text is to be discussed at the next SURSG meeting. **ACTION ITEM 3-1**

3.3 The approved and modified SURSG work plan by the Meeting is as follows, also provided in **Appendix A** to the Report.

Group	Task	Description	Start	End	Task Owner(s)
Recommendation Stage	3	Report on the possible implementation of surveillance data sharing in SWIM	SURSG/2	SURICG/7	TBD
	3-1	Consolidation of all the outcomes of Task 2 into a report according to the contents defined in TOR for submission to SURICG	SURSG/2	SURICG/7	Hong Kong China, IATA, Singapore, Thailand, Viet Nam
	3-2	Preparation of draft multi-lateral agreement on surveillance data sharing and data consumption [absorbed into Task 4]	SURSG/2	SURICG/7 (to be reviewed at SURSG/3)	TBD
	4	Guidance materials for the sharing and access of surveillance data	SURICG/7 (after Demo)	SURICG/9 SURICG/10	TBD
	4-1	Preparation of the framework and 1 st draft of guidance material	SURICG/7 SURICG/8 (after Demo)	SURSG/3 SURSG/4 or SURSG/5 ¹	TBD
	4-2	Further development of the working draft of guidance material for endorsement by SURICG and CNS SG	SURSG/3 (after Demo)	SURICG/9 SURICG/10	TBD

Agenda Item 4: Progress update of SWIM Trial Implementation Group (S3TIG)

Outcomes of the Kick-off Meeting of the Surveillance Sharing in SWIM (System Wide Information Management) Trial Implementation Group (S3TIG) – Sec (WP/05)

4.1 The paper summarized the outcomes of the Kick-off Meeting of Surveillance Sharing in SWIM (System Wide Information Management) Trial Implementation Group (S3TIG) held on December 6, 2022, via Video Tele Conference (VTC).

Business Models for Joining the S3TIG Trial – PCCWG (WP/12)

4.2 PCCWG presented proposals on how ANSPs can participate in the upcoming S3TIG Trial, including the CRV connectivity requirements, surveillance data sharing demonstration, and scenario-based demonstration. The Meeting noted that it is beneficial to the aviation community if more ATM stakeholders participate in the SWIM Data Exchange. The Meeting was invited to share the

¹ Subject to timing of Demo.

number of Member States which will participate in the Trial and discuss the scope of the Trial for the commercial and technical arrangement.

4.3 The Meeting shared the need to explore other options to join the Trial/demo by States/Administrations having no CRV connectivity. Additionally, further deliberations were required about the cost implication for States having CRV connectivity but no spare bandwidth to share for the Trial/demo. It was agreed that S3TIG will incorporate this discussion into the agenda item while preparing the Survey questionnaire. **ACTION ITEM 3-2**

Agenda Item 5: Technical coordination on surveillance data sharing and demonstration

A Joint Event for Surveillance Data Sharing in SWIM Trial and SWIM over CRV Demonstration - Hong Kong, China (WP/07)

5.1 Hong Kong China proposed combining the surveillance data sharing in the SWIM Trial under S3TIG (“the Trial”) and the SWIM Demonstration over CRV under SWIM TF as a joint event for States’ consideration. It was informed that the proposal on combing the two events would save effort in preparing similar network and system infrastructure for the Trial, demonstrate data exchange of different throughput and examine such bandwidth requirements on CRV, and enhance user experience with more types of SWIM services showcased. The Meeting was invited to support the combing of the Demo and Trial and participate in the joint event.

5.2 The Meeting endorsed that *the Trial and SWIM over CRV Demonstration* should be conducted as a **Joint Event**. However, the proposal needs to be agreed by SWIM TF Meeting. Further discussions on this paper are recorded under SP/01 discussion in the report from sections 5.6 to 5.9.

Trial of Surveillance Data Sharing Using SWIM - Hong Kong, China (WP/08)

5.3 The paper presented the proposal on the items to be demonstrated in the Trial of the surveillance data sharing using SWIM under S3TIG for States’ consideration. The Trial was proposed to be conducted as a demonstration event followed by an evaluation period of about three months, subject to discussion in S3TIG.

5.4 The Meeting noted that with live surveillance data sharing being realized among participating States in the Trial, the practicality and technology in surveillance data sharing using SWIM could be shown to the audience. In addition, a scenario-based demonstration was proposed to visualize the benefits brought to ATFM operation during the Event. Prepared scripts and data, including surveillance data, flight information, MET information, and flow management information, will be exchanged in real-time to simulate the data flow of a complete life cycle of an ATFM operation, which cannot be easily captured in a live situation. Other SWIM capabilities proposed to be demonstrated in the Event were also shared.

5.5 Further discussions on this paper are recorded under SP/01 discussion in the report from sections 5.6 to 5.9.

Survey for Expression of Interest (EOI) in participating in Demo/Trial of S3TIG – Sec (SP/01)

5.6 The Meeting deliberated the proposed questions for Expression of Interest (EOI) in participating in the Joint Event of S3TIG and reviewed the S3TIG Joint Event Tentative Timelines. The Meeting agreed that the proposed questions need modifications along with the addition of more information to support States/Administrations to respond to the Survey.

5.7 The S3TIG will amend the questionnaire and prepare supporting documents containing useful information such as definitions of various terms used in the questionnaire to clear potential doubts of Member States/Administrations responding to the survey and any other necessary modifications. The questionnaire will be a composite survey with ideally 2 separate sets of questions respective for the

Trial and SWIM over CRV Demonstration (Demo). **ACTION ITEM 3-3** The S3TIG will share the part of the questionnaire mainly related to the Demo and the endorsement of the proposal for the Joint Event by SURSG/3 in a joint working paper (say by Hong Kong China, Singapore and Thailand) or a paper by lead of S3TIG to SWIM TF/7 to be held from 9-12 May 2023 in Bangkok, Thailand for SWIM TF/7's agreement. **ACTION ITEM 3-4.** The Meeting also agreed that the Survey will be shared with States/Administrations only, not involving any other parties.

5.8 The Survey will be shared, after SWIM TF/7 endorsement, with Member States/Administrations by ICAO Secretariat. **ACTION ITEM 3-5** The S3TIG will draft a formal package/agreement to participate in the Joint Event by Member States/Administrations to be shared with interested States/Administrations after the outcomes of the Survey are processed, analyzed, and interested Members to participate in the Demo/Trial are identified. **ACTION ITEM 3-6**

5.9 The tentative timelines to conduct the Trial and/or Demo were as follows:

Task	Responsible Parties	Tentative Timelines/Deadlines
Finalization of Survey Questionnaire	SURSG/3 and S3TIG Participants, Led by HK China, Thailand, and Singapore	28 April 2023
Sharing Survey with APAC Member States	ICAO Secretariat	19 May 2023 (4 weeks will be provided to States to respond)
Submission of response and States and possible extension of Survey	All Interested APAC States	23 June 2023
Compilation of Response to Survey	ICAO Secretariat SURSG/S3TIG Chairs/Leads	30 June 2023
Sharing formal package with agreed Parties to participate in Demo and/or Trial	Agreed Parties and Host State (Hong Kong China)	July 2023 (1 Month will be provided to States to respond)
Working-level preparatory Meetings (online/in-person)	Lead and Deputy Lead, agreed Parties	Mid-August 2023 – October 2023
Trial/Demo	Agreed Parties and Host State (Hong Kong China)	November 2023 (Worst case scenario: Q1 2024)
Report on Demo	Lead and Deputy Lead	SURSG/4

Agenda Item 6: Discussion of technical issues and solutions in surveillance data sharing

Data Format for Surveillance Data Sharing – Hong Kong, China (WP/06)

6.1 Hong Kong China presented the proposal on the data format to be exchanged in the Trial of the surveillance data sharing using SWIM under S3TIG for States' consideration. As a

recommendation from the Study Report delivered under SURSG, the Trial to be conducted under S3TIG would adopt the ADS-B CAT 21 Version 2.1 data format to support ATFM operation.

6.2 The paper compared the pros and cons of using FIXM, JSON, and original ASTERIX data and suggested that using the original ASTERIX data format as the payload for SWIM data exchange would be a preferred option. Based on the ASEAN Demonstration, the AMQP headers were proposed for carrying the surveillance data payload.

6.3 Further discussions on this paper are recorded under WP/09.

State of SWIM implementation in Singapore and readiness to share ADS-B data – Singapore (WP/09)

6.4 Singapore presented the progress of SWIM implementation in Singapore and its impact on the sharing of surveillance information, specifically ADS-B data from the Singapore ADS-B sensor. Singapore shared its plan for upgrading the SWIM infrastructure, which includes a provision for the connection to the CRV through which data can be shared. After completing the SWIM upgrading works, Singapore shared its intention to publish the ADS-B data from the Singapore ADS-B sensor for consumption by approved parties as an ASTERIX-based JSON formatted message similar to the current ADS-B service in the Singapore SWIM is provisioned.

6.5 Considering the format for ADS-B data sharing has not yet been decided, Singapore proposed that the Meeting direct the S3TIG group to be deliberate on this matter and consider the appropriate message format to facilitate ADS-B data exchange.

6.6 The Meeting discussed the pros and cons of different data formats proposed in the WP/06 and concurred that ASTERIX and JSON, both may be considered as potential data formats for conducting the trial and SWIM over CRV demonstration. Another proposal was to add a question related to the preferred data format, with ASTERIX and JSON data format as potential answers, in the Survey questionnaire to be prepared by S3TIG to better understand the readiness of interested demo/Trial parties. S3TIG will discuss the requirements of the proposed question to add in the survey questionnaire. **ACTION ITEM 3-7** S3TIG will further deliberate on this topic of interest and priority and propose data format(s) for the Trial and Demo. **ACTION ITEM 3-8**

Benefits of Surveillance Data Sharing for MET Information Services in SWIM - Hong Kong, China (IP/02)

6.7 Hong Kong Observatory (HKO), under Hong Kong China, presented how future MET information services could be enhanced using the surveillance data shared in SWIM. The Meeting noted that MET information to be exchanged in SWIM includes ICAO Meteorological Information Exchange Model (IWXXM) messages, gridded products, and imagery. In particular, the four dimensions (4D) MET information service can also provide users with on-demand access to polygons or images of high-impact weather phenomena derived from the gridded products, which is useful to aviation users for assessing the potential impact of weather on their flight trajectory over time. Furthermore, the benefits of surveillance data for MET information services to ANSP and airlines were elaborated.

6.8 SURSG Chair requested to explore the possibility to include the elements and proposed applications in the IP/02 paper for demonstration in the proposed Joint Event, which was agreeable to HKO and the Meeting. The S3TIG will consider the feasibility to incorporate the demonstrations proposed in the paper in the planned Joint Event. **ACTION ITEM 3-9**

Agenda Item 7: States' experience for Surveillance data sharing

Lessons Learned in Sharing Surveillance Data using SWIM Information Service - Republic of Korea (WP/10)

7.1 The paper presented ROK's lessons learned in the exchange of surveillance data through a SWIM information service, specifically through the utilization of the Advanced Message Queuing Protocol (AMQP) based messaging services. With the introduction of characteristics of surveillance data, the Meeting noted ROK had implemented SWIM information services for surveillance data currently working on the SWIM testbed. Additionally, the considerations for future implementation including architectural, topological, and technical considerations and practical implementation of surveillance information service along with lessons learned were shared with the Meeting.

7.2 In response to a question, ROK clarified that it provides both ASTERIX and JSON data formats to the Stakeholders based on Stakeholder's needs.

Agenda Item 8: Review of SURSG/S3TIG ToR and work plan/program

Review ToR and Action Items List – Sec (WP/04)

8.1 The paper presented the current ToR of SURSG and S3TIG and the Action item list of SURSG Meetings for Meeting review and update. The Meeting noted that there was no need to update the ToR of both groups and the Action Items list was discussed and updated by the Meeting. The reviewed action item list is provided in **Appendix B** of the Report.

Agenda Item 9: Next Meetings and any other Business

Date and Venue for the Next Meeting

9.1 The Meeting decided that further Meetings of S3TIG would be conducted in Virtual mode until the need for In- Person meetings arises.

9.2 The Meeting discoursed the date and venue of the next SURSG Meeting. It was advised that the next Meeting of SURSG should be held after the proposed Surveillance data sharing in the SWIM Trial and the SWIM Demonstration over CRV Demonstration are completed. The Meeting agreed that the next Study Group Meeting would be In-Person after the successful completion of the Joint Event. The ICAO Secretariat will inform participants about the exact dates and venue in due course.

REVISED WORK PLAN of SURSG

Table 1						
Group	Task	Description	ToR Para.	Start	End	Task Owner(s)
Feasibility Study Stage	1	Preparation of Progress Report on the SURSG deliverables	-	-	Before every SURSG Meeting	Study Group Lead(s)
	2	Study, identification and recommendation of possible and practical models for surveillance data sharing in SWIM	2	SURSG/1	SURSG/2	Hong Kong China (TL)
	2-1	Preparation of Concept of Use/Operation	2(a) 3(c)	SURSG/1	SURSG/2	Singapore/TL, Hong Kong China, Thailand, Viet Nam
	2-2	Study, identify and recommend on Implementation Model including the consideration of system design and collaboration model on sharing of surveillance data.	2(b), (d) 3(a)	SURSG/1	SURSG/2	Hong Kong China, Republic of Korea, Singapore, Thailand, Viet Nam
	2-3	Study, identify and recommend on an Infrastructure Model based on SWIM and CRV infrastructure	2(f) 3(b)	SURSG/1	SURSG/2	China, Hong Kong China, Singapore, Thailand, Viet Nam, PCCW Global as advisor
	2-4	Study, identify and recommend on a Business Model including commitments by data sharing participants as well as incurred resource and cost	2(b), (c), (d) 3(d), (e)	SURSG/1	SURSG/2	China, Hong Kong China, Singapore, Thailand, Viet Nam
	2-5	Study, identification and recommendation of Participation Model in consideration of commitments by data consumers and multi-lateral agreement on surveillance data sharing	2(c), (d) 3(e)	SURSG/1	SURSG/2	Hong Kong China, Singapore, Thailand, China, Viet Nam, IATA

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	2-6	Preparation of implementation roadmap and time frames with consideration of approach, types of surveillance data and information exchange model	2(e) 3(a)	SURSG/1	SURSG/2	China, Hong Kong China, Singapore, Thailand, Viet Nam
Recommendation Stage	3	Report on the possible implementation of surveillance data sharing in SWIM	-	SURSG/2	SURICG/7	TBD
	3-1	Consolidation of all the outcomes of Task 2 into a report according to the contents defined in TOR for submission to SURICG	-	SURSG/2	SURICG/7	Hong Kong China, IATA, Singapore, Thailand, Viet Nam
	3-2	Preparation of draft multi-lateral agreement on surveillance data sharing and data consumption [absorbed into Task 4]	SURSG/2	SURICG/7 (to be reviewed at SURSG/3)	TBD	3-2
	4	Guidance materials for the sharing and access of surveillance data	SURICG/7 (after Demo)	SURICG/9 SURICG/10	TBD	4
	4-1	Preparation of the framework and 1 st draft of guidance material	SURICG/7 SURICG/8 (after Demo)	SURSG/3 SURSG/4 or SURSG/5 ¹	TBD	4-1
	4-2	Further development of the working draft of guidance material for endorsement by SURICG and CNS SG	SURSG/3 (after Demo)	SURICG/9 SURICG/10	TBD	4-2

¹ Subject to timing of Demo.

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ACTION ITEMS LIST FOR SURSG

Action ID	Task	Responsible Person	Due Date	Deliverables	Status	Remarks
1-1	To provide the mapping for each task with terms of reference of SURSG for detailed technical description of each task	Hong Kong China	SURSG/2	WP	Close	
2-1	To prepare a draft ToR of S3TIG by mid-April 2022 and send to all registered delegates of SURSG/2 for their feedback by an email	Hong Kong China, ICAO Secretariat	15-Apr-22	Draft ToR for SURICG/7 adoption	Close	
3-1	Description of Task 4 (on Guidance Material) would be elaborated to include the incorporation of a section of technical and operational considerations as reference for the preparation of multilateral agreement for states/parties intending to share surveillance data and the elaborated text is to be discussed at the next SURSG meeting	SURSG	SURSG/4	WP in SURSG/4	Open	
3-2	The Meeting shared the need to explore other options to join the Trial/demo by States/Administrations having no CRV connectivity. Further deliberations are required about the cost implication for States having CRV connectivity but no spare bandwidth to share for the Trial/demo. S3TIG will incorporate this discussion into the agenda item while preparing the Survey questionnaire	S3TIG, ICAO Secretariat	28 April 2023	Survey questionnaire with supporting documents	Open	

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Action ID	Task	Responsible Person	Due Date	Deliverables	Status	Remarks
3-3	The S3TIG will amend the questionnaire and prepare supporting documents containing useful information such as definitions of various terms used in the questionnaire to clear potential doubts of Member States/Administrations responding to the survey and any other necessary modifications. The questionnaire will be a composite survey with ideally 2 separate sets of questions respective for the Trial and SWIM over CRV Demonstration (Demo).	S3TIG, ICAO Secretariat	28 April 2023	Survey questionnaire with supporting documents	Open	
3-4	The S3TIG will share the part of the questionnaire mainly related to the Demo and the endorsement of the proposal for the Joint Event by SURSG/3 in a joint working paper to SWIM TF/7 to be held from 9-12 May 2023 in Bangkok, Thailand for SWIM TF/7's agreement	S3TIG, ICAO Secretariat	SWIM TF/7 (12 May 2023)	Working Paper		
3-5	The Survey will be shared, after SWIM TF/7 endorsement, with Member States/Administrations by ICAO Secretariat	ICAO Secretariat	19 May 2023	State Letter for responding to the Survey questionnaire	Open	
3-6	The S3TIG will draft a formal package/agreement to participate in the Joint Event by Member States/Administrations to be shared with interested States/Administrations after the outcomes of the Survey are processed, analyzed, and interested Members to participate in the Demo/Trial are identified	S3TIG, ICAO Secretariat	July 2023	Formal package/agreement	Open	SGP: Suggested to initiate this task in parallel ASAP Take into consideration of formal agreement from 2019 demo.

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Action ID	Task	Responsible Person	Due Date	Deliverables	Status	Remarks
3-7	The requirements to add a question related to the preferred data format, with ASTERIX and JSON data format as potential answers, in the Survey questionnaire will be evaluated.	S3TIG	28 April 2023	Survey questionnaire with supporting documents	Open	
3-8	S3TIG will further deliberate on potential data formats for conducting the trial and SWIM over CRV demonstration. S3TIG will propose data format(s) for the Trial and Demo	S3TIG	July 2023	Finalized data format(s)	Open	
3-9	The S3TIG will consider the feasibility to incorporate the demonstrations proposed in the IP/02 in the upcoming Joint Event.	S3TIG	Q3 2023	Final Scenarios for Demo/Trial	Open	

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List of Participants

	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
1.	CAMBODIA (3)				
	1. Mr. Neang To	Chief of Bureau of ANS Department	neangto.ans@gmail.com;		✓
	2. Mr. Heng Mengkong,	Deputy Chief of Bureau of ANS Department	hengmengkong@gmail.com;		✓
	3. Mr. Khorn Veasna	Official of ANS Department	khornveasna82@gmail.com;		✓
2.	CHINA (10)				
	4. Mrs. Cao Susu	Assistant of CNS Division Air Traffic Management Bureau of CAAC	caosusu_atmb@qq.com;		✓
	5. Mrs. Gao Honglei	Assistant of CNS Division Air Traffic Management Bureau of CAAC	hlgao_atmb@foxmail.com;		✓
	6. Mr. Zhao Xin	Engineer Technical Centre Air Traffic Management Bureau of CAAC	zhaox@atmb.net.cn;		✓
	7. Mr. Jia Jianghe	Engineer Technical Centre Air Traffic Management Bureau of CAAC	jjjianghe@atmb.net.cn;		✓
	8. Mr. Wang Xinrong	Engineer East China Regional Air Traffic Management Bureau of CAAC	michaelwxrong@163.com;		✓

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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
9.	Mr. Su Lisi	Engineer Southwest China Regional Air Traffic Management Bureau of CAAC	slslsl13@163.com;		✓
10.	Mr. Li Gang	Senior Engineer TEDC Air Traffic Management Bureau of CAAC	steel_de_lee@163.com;		✓
11.	Mrs. Chen Xuezheng	Engineer TEDC Air Traffic Management Bureau of CAAC	chenxuezheng@tedc-atc.com;		✓
12.	Mr. Jin Kaiyan	Senior Engineer Aviation Data Communication Corp. of ATMB CAAC	jinky@adcc.com.cn;		✓
13.	Mr. Liu Wei	Senior Engineer Aviation Data Communication Corp. of ATMB CAAC	liuw@adcc.com.cn;		✓
3.	HONG KONG, CHINA (8)				
14.	Mr. Alan Tam	Operations Officer (3) Civil Aviation Department, Hong Kong, China	ahlam@cad.gov.hk;	✓	
15.	Mr. Marco Mang-Hin Kok	Acting Senior Scientific Officer Hong Kong Observatory	mhhok@hko.gov.hk;	✓	
16.	Mr. Vincent WONG	Acting Chief Electronics Engineer Civil Aviation Department, Hong Kong, China	vplwong@cad.gov.hk;	✓	

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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
	17. Mr. Michael CHU	Senior Electronics Engineer Civil Aviation Department, Hong Kong, China	mmhchu@cad.gov.hk;	✓	
	18. Mr. Gene KWOK	Electronics Engineer Civil Aviation Department, Hong Kong, China	gwhkwok@cad.gov.hk;	✓	
	19. Mr. Henry CHAN	Electronics Engineer Civil Aviation Department, Hong Kong, China	hhlchan@cad.gov.hk;	✓	
	20. Mr. Peter LEUN	Electronics Engineer Civil Aviation Department, Hong Kong, China	pyhleung@cad.gov.hk;	✓	
	21. Mr. Tsz Lo Cheng	Chief Experimental Officer (Aviation Meteorological Innovative Solutions) Hong Kong Observatory	tlcheng@hko.gov.hk;	✓	
4.	FIJI (3)				
	22. Mr. Makiti Raratabu	Air Navigation Services Inspector - ATM/MET CAA Fiji	makiti.raratabu@caaf.org.fj;		✓
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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
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6.	MALAYSIA (4)				

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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
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16.	FREQUENTIS (2)				

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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
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	STATE/NAME	TITLE/ORGANIZATION	E-MAIL	In-Person	Virtual
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Third Meeting of the Surveillance Study Group (SURSG/3)

(Hong Kong China, 22– 24 March 2023)

LIST OF WORKING, INFORMATION PAPERS, AND PRESENTATIONS

WP/IP No.	Agenda	Subject	Presented by
WORKING PAPERS			
WP/01	1	Provisional Agenda	Secretariat
WP/02	2	Review of Relevant Meetings	Secretariat
WP/03	2	Outcome of the Common Aeronautical Virtual Private Network Operations Group (CRV OG/11)	Secretariat
WP/04	8	Review ToR and Action Items List	Secretariat
WP/05	4	Outcome of the Kick off Meeting of the Surveillance Sharing in SWIM (System Wide Information Management) Trial Implementation Group (S3TIG)	Secretariat
WP/06	6	Data Format for Surveillance Data Sharing	Hong Kong, China
WP/07	5	A Joint Event for Surveillance Data Sharing in SWIM Trial and Swim over CRV Demonstration	Hong Kong, China
WP/08	5	Trial of Surveillance Data Sharing Using SWIM	Hong Kong, China
WP/09	6	State of SWIM implementation in Singapore and readiness to share ADS-B data	Singapore
WP/10	7	Lessons Learned in Sharing Surveillance Data using SWIM Information Service	Republic of Korea
WP/11	3	Review of Work Plan for Surveillance Study Group	Hong Kong, China
WP/12	4	Business Models for Joining the S3TIG Trial	PCCW Global
INFORMATION PAPERS			
IP/01	-	Meeting Bulletin	Secretariat
IP/02	6	Benefits of Surveillance Data Sharing For MET Information Services in SWIM	Hong Kong, China
PRESENTATIONS			
SP/01	--	Survey for Expression of Interest (EOI) in participating in Demo/Trial of S3TIG	Secretariat and SURSG Chair
