



ICAO

*International Civil Aviation Organization***Thirteenth Meeting of the Common aeRonautical
Virtual Private Network Operations Group (CRV
OG/13)***Wellington, New Zealand, 05-08 March 2025***Agenda Item 15:** Review ToR and update Action Items of CRV OG**REVIEW CRV OG TOR AND ACTION ITEMS**

(Presented by the Secretariat)

SUMMARY

The paper presents current Terms of Reference (ToR) and Action Items of CRV Operations Group (CRV OG) for review and update by the meeting.

1. INTRODUCTION

1.1 The Twenty Seventh Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/27) was held in Bangkok, Thailand, from 5 to 8 September 2016. The meeting adopted the **Decision APANPIRG/27/33**: Creation of the Common Aeronautical VPN (CRV) Operations Group (CRV OG) to establish the CRV OG.

1.2 The CRV OG rules and procedures were drafted and agreed upon by the CRV Task Force (CRV TF). The APANPIRG/27 meeting reviewed and adopted the ToR of CRV OG provided in Appendix B to APANPIRG/27- WP/9.

1.3 Since then, CRV OG has developed various action items, which were consolidated as an Action List during CRV OG/2 and renamed as a Subject Task list in CRV OG/5.

1.4 This paper shares the latest CRV OG ToR and Action Items/Subject Task List for the meeting review.

2. DISCUSSION

2.1 The Twenty Third Meeting of the Communications, Navigation, and Surveillance Sub-Group (CNS SG/23) of APANPIRG was held in Bangkok, Thailand, from 2 to 6 September 2019. The meeting reviewed the changes proposed by CRV OG/5 to the CRV OG ToR for the amendment to the title of CRV (the Common aeRonautical VPN) to undertake continuous CRV service improvements for future needs and agreed on the **Decision CNS SG/23/2** (ACSICG/6/2 - CRV OG/5/1) - Revised Terms of Reference of CRV OG.

2.2 The Ninth Meeting of the Common aeRonautical Virtual Private Network Operations Group of APANPIRG (CRV OG/9) held from 25 to 27 January 2022 via video teleconference and the Eleventh Meeting of the Common aeRonautical Virtual Private Network Operations Group of APANPIRG (CRV OG/11) held from 1 to 3 February 2023 updated ToR with editorial corrections provided in **Appendix A** of this paper.

2.3 The Subject Task List for CRV OG was reviewed and updated by the CRV OG/12 meetings, which is provided in **Appendix B** of this paper.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) review and update the ToR of CRV OG provided in **Appendix A** of this paper;
- b) review and update the Subject Task List for CRV OG provided in **Appendix B**; and
- c) discuss any relevant matter as appropriate.

**Common aeRonautical Virtual Private Network (VPN) Operations Group (OG) of
Asia/Pacific Air Navigation Planning and
Implementation Regional Group (APANPIRG) (APANPIRG CRV OG)**

TERMS OF REFERENCE

1. Background

The establishment of APANPIRG CRV OG was proposed during the deliberations of the CRV Task Force (TF) as a dedicated group to provide oversight of the CRV operations and the performance of the CRV Service Provider. The APANPIRG CRV OG is formally established by APANPIRG Decision 27/33.

2. Terms of Reference

The Common aeRonautical Virtual Private Network (VPN) Operations Group (OG) will provide oversight of the function and performance of the CRV and the performance of the Service Provider. The following are the activities to be performed:

- a) Oversee the implementation of the CRV post Contract Award;
- b)
- c) Co-ordinate and standardize the establishment or upgrade of CRV services as required;
- d) Co-ordinate activities with other regions' ICAO CRV OGs, if any, to make sure that decision making and communication with CRV Service Provider is consistent and timely;
- e) Oversee the performance of the CRV Service Provider, including customer service;
- f) Oversee the performance of the CRV network;
- g) Oversee the escalation and solving by the CRV Service Provider of issues associated with the provision of the CRV, including safety and security related issues;
- h) Assist with the resolution of issues associated with the provision of the CRV among the CRV Users as required, including safety and security related issues;
- i) Assist with the migration of Aeronautical Fixed Services (AFS) onto the CRV, in line with the GANP and ICAO APAC seamless ANS plan;
- j) Maintain CRV OG documentation associated with the function, performance and management of the CRV, including the CRV OG Operations Manual, a list of CRV users and a record of variations to the common tender package;
- k) Accept deliverables from the CRV Service Provider on behalf of the CRV Users as required;
- l) Promote the use of CRV;

- m) Undertake continuous service improvements review to ensure CRV meets future needs; and
- n) Perform any other activity as required by CRV operations.

3. Reporting

The CRV OG will report to Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) through ACSICG and CNS SG.

4. Participation

The CRV OG will include all APAC Member States/Administrations, and any other organization as needed. Member States and/or inter-regional entry/exit Administrations in other ICAO regions may also be invited or request to participate in the activities of CRV OG.

5. Conduct of the work

It is anticipated that the CRV OG will conduct its work primarily by Web Conferences, teleconferences and other electronic means of communications. Face to Face meetings of CRV OG may be required on an annual basis.

The ICAO APAC Regional Office will provide secretariat support for the CRV OG.

6. Rapporteur

There will be two Co-Chairpersons of the CRV OG, one primarily responsible for Asia coordination and the other for Pacific coordination.

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Reference	Who	What	Due date	Status	Completed on	Result
4-1	All member States	Complete contract with PCCW Global by no later than 12/2020	12/31/2021 Dec 2022 (in CRV OG/9) CRV OG12	Open	on-going	
7-2	PCCW Global & New Zealand	Pacific solution on inter-connection with PASNET, Feasiblity for interconnection	5/1/2022 Dec 2022 (CRV OG/9) CRV OG12 (decided in CRV OG/11)	close		No intercoonection with PASNET is possible. Close in CRV OG12
7-6	Hong Kong China	SWIM demonstration over mini-Pseudo CRV by HK, Singapore and Thailand	1/1/2022 CRV OG/11 (CRV OG/9) CRV OG12 (in CRV OG11)	Open	Modified in CRV OG12 Propose to close	HK is conducting POC with PCCWG in terms of concept for sharing surveillance data (CRV OG/9)

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8-5	Co-Chairs, ICAO RO, Singapore, USA	Continue the feasibility study on inter-regional connection to support business case analysis	1/1/2022 CRV OG/11 (in CRV OG/9) CRV OG12 (in CRV OG/11)	on going	Ongoing. Technical Proposal finalized in CRV OG8 meeting was NA due to takeover of Lumen by Cirion Technologies	<p>From: Nibhani, Soniya <SNibhani@icao.int> Sent: Monday, 29 August 2022 12:03 PM To: Hickford, Vaughan <vaughan.hickford@airways.co.nz>; Almeida, Francisco <falmeida@icao.int> Cc: fuzieda@dgac.gob.cl; cvergara@dgac.gob.cl; Luo, Yi <yluo@icao.int>; Javier Vittor <jvittor@icao.int>; Nibhani, Soniya <snibhani@icao.int> Subject: RE: CRV - REDDIG II Interconnection</p> <p>CAUTION: This email originated from outside of the Corporation. If you do not recognise the sender or you are not certain that the content is safe, then do not click on any links or open any attachments. Hi Vaughan,</p> <p>Thanks for the reply.</p> <p>I completely agree with the proposal. As</p>
11-1	CRV OG Chairs, ACSICG Chairs, Australia, Japan, Jordan, Fiji, India, Hong Kong China, New Zealand, Singapore, Thailand, USA and ICAO Secretariat.	ICAO Secretariat will do necessary coordination with volunteered Member States for organising the CRV OG Ad-hoc Governance Group Meeting from 22-23 May 2023 and drafting the ToR	ACSICG/10	close	22-23 May 2023 CRV OG Ad-hoc Governance Group organised Propose to close	ToR need to be discussed in CRV OG Ad-hoc group meeting on 20 April 2023
11-2	ICAO Secretariat, Co-Chair (Asia)	The latest version of CRV OG Operational Manual will be published on ICAO APAC e-docs under CNS, ICAO APAC CRV Secure portal, and on CRV portal hosted by Airways New Zealand	Feb-23	close	2/24/2023 Propose to close	APAC State Letter Ref.: AP034/23 (CNS) - Publication of ICAO APAC CRV OG Operations Manual v1.2 and ICAO APAC CRV Implementation Plan v2.2 dated 24 Feb 2023
11-3	CRV OG Ad-hoc Expert Group	Nepal suggested to incorporate relevant guidance in the form of Process and Procedures into the CRV OG OM clarifying that Member States can request support of ICAO Secretariat and CRV OG for dispute resolution matters or other significant issues if arises. CRV OG Ad-hoc Expert Group will discuss the possibility of adding such provision and draft relevant clauses to add in CRV OG OM.	CRV OG/12 CRV OG13	Open		Added into agenda item for 20 April 2023 Meeting

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11-4	ICAO Secretariat, Co-Chair (Asia)	The latest version of CRV OG Implementation Plan without restricted information will be published on ICAO APAC e-docs under CNS Section. The latest version of CRV OG Implementation Plan will be uploaded on the ICAO CRV Secure portal, and CRV portal hosted by Airways New Zealand	Feb-23	close	2/24/2023 Propose to close	APAC State Letter Ref.: AP034/23 (CNS) - Publication of ICAO APAC CRV OG Operations Manual v1.2 and ICAO APAC CRV Implementation Plan v2.2 dated 24 Feb 2023
11-5	CRV OG Ad-hoc Expert Group	CRV OG Ad Hoc Expert Group will work on to modify relevant CRV documents and update the CRV OG Operations Manual to ensure that any changes within CRV consider modifications required to the ATN Documentation document tree	CRV OG/12 CRV OG/13	Open		
11-6	ICAO Secretariat	The ICAO Secretariat will take necessary action to update ATN Documentation Tree on the ICAO APAC Regional Implementation Projects webpage with the proposed first snapshot of the Tree that would be modified in future as more modifications would be made by ACSICG/CRV OG Meetings	CRV OG/12 CRV OG/13	Open		
11-8	CRV OG Co-Chairs ICAO Secretariat	Modified table will be shared with APAC Member States for updates using New Zealand hosted CRV portal. The table will be updated by ACSICG/10.	ACSICG/10	close	Done, Propose to close	Email shared with CRV local POC on 17 March 2023
11-9	CRV OG Ad-hoc Expert Group	The Group will create ToR for security review of CRV for Option 2 and 5 presented in WP/14 in CRV OG11.	ACSICG/10	close	Done in ACSICG/8	
Seminar 12-1	SWIM TF, ICAO Secretariat	A dialogue about bandwidth requirements for SWIM services for CRV were initiated. Considering that the basic principle of information exchange in SWIM is publish/subscribe, the meeting requested that the ICAO Secretariat share information about any discussion planned in SWIM TF on developing a ruleset to guide or instruct users about information should be subscribed to so systems and networks are not overloaded or crashed by excessive subscription. ICAO Secretariat informed that such discussion is not being done in SWIM TF. ICAO Secretariat will share information with SWIM TF for further information/action required on this matter	CRV OG/13	Open	Propose to close	

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12-1	PCCWG	PCCWG will provide quarterly bandwidth utilization reports to the CRV OG Ad-hoc expert group as a periodic update	CRV OG/13	on going		
12-2	CRV OG Ad-hoc Expert Group	The CRV OG Ad-hoc Expert group would review and present the revised Tree to the next CRV OG meeting for review and endorsement	CRV OG/13	Open		
12-3	ACSICG Co-Chair, ICAO Secretariat	The Meeting advised sharing the Tree with ACSICG for further review and modifications for AMHS and other relevant AFS sections	CRV OG/13	Open		
12-4	CRV OG Ad-hoc Expert Group, ICAO Secretariat	The CRV OG Ad-hoc Expert group develop the process for testing new SWIM services following the procedure mentioned in Appendix A to the CRV OG/12 report	CRV OG/13	Open		
12-5	CRV OG Ad-hoc Expert Group, ICAO Secretariat	<p>The CRV OG Ad-hoc Expert group modify the process provided in Appendix B to incorporate various discussions and suggestions shared during the Meeting :</p> <ol style="list-style-type: none"> 1. To assess the feasibility of a Service Provider / Service Consumer (SPSC) connecting to the CRV, the list of parameters provided in a(ii) of the process needs to be reviewed and amended to accommodate other potential required parameters. 2. A process and procedure to test a new service on the CRV network need to be drafted. 3. Further discussion is needed for the required class of SWIM services. 4. The feasibility of testing a new SWIM service first on the test GRE tunnel and after successful testing on the test GRE tunnel, its transfer over to the operational GRE tunnel needs further deliberations. 5. The number of GRE tunnels for each SWIM service may not be feasible. 6. Further discussion is required for IP assignments and their grouping. 7. Currently, in the System Design Document (SDD), the QoS of SWIM services is not mentioned, requiring further action. 	CRV OG/13	Open		

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12-6	ICAO Secretariat, CRV OG Co-chair (Asia)	The latest version of the CRV OG Operational Manual will be published on ICAO APAC e-docs under CNS, ICAO APAC CRV Secure portal, and on the CRV portal hosted by Airways New Zealand	CRV OG/13	Open	Requested latest version from Vaughan on 31 Jan 2024 Uploaded on the portal on 5 Feb 2024 Propose to close	
12-7	CRV OG Ad-hoc Expert Group, ICAO Secretariat	Singapore suggested modifying the local and national point of contact responsibilities mentioned in CRV Imp Plan to accommodate the new CRV user's definition. Accordingly, the CRV Implementation plan may need further modifications to accommodate new CRV users definition. The Meeting requested that the CRV OG Ad-hoc Expert group incorporate this task into their agenda items	CRV OG/13	Open		
12-8	ICAO Secretariat	ICAO Secretariat will share the information requested and templates of daily, weekly, annual tasks of CRV with all CRV National and local Points of contact along with CRV OG/12 participants before 2 February 2024	2-Feb-24	Open	Sent email on 31 Jan. Last date to submit resposne: 29 Feb 2024	
12-9	States/Administrations	All States/Administrations already utilizing CRV will submit the list of tasks in the requested template to the ICAO Secretariat before 31 March 2024	31-Mar-24	Open	Reminder to sent on 1 March for extension date by 31 March 2024	
12-10	ICAO Secretariat	ICAO Secretariat will share a doodle with all CRV OG Ad-hoc governance group experts to finalize the date for 24 April or 3 May 2024	2-Feb-24	Open	Email sent on 29 Jan. Doodle due on 2 Feb Final date 3 May 2024 Propose to close	
12-11	ICAO Secretariat	ICAO Secretariat will share the list of users having access to the CRV portal with all States/Administrations before 2 February 2024 for updates	2-Feb-24	Open	Email sent on 31 Jan. Propose to close	
12-12	States/Administrations	All States/Administration will share the updated list of a maximum of three users to get access to the portal before 29 February 2024	29-Feb-24	Open	Reply awaited for 29 Feb Propose to close	
12-19	States/Administrations	The first draft of the form will be sent to the Ad Hoc Expert Design Group before 31 January 2024 for comment and feedback (APX G)	31-Jan-24	Open	Sent email on 31 Jan. Last date to submit resposne: 31 March 2024	Propose to close

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12-20	SWIM TF, ICAO Secretariat	The ICAO Secretariat will share the draft form with the SWIM Task Force Task Leads for filling in the form and for comment and feedback.	1-Feb-24	Open	Sent email on 31 Jan. Last date to submit resposne: 31 March 2024	Propose to close
12-21	CRV OG Ad-hoc Expert Group, ICAO Secretariat	CRV OG Ad-hoc Expert Group will review the duly filled form in the April 2024 Meeting	Apr-24	Open	Meeting is on 24 April 2024	Propose to close
12-22	ICAO Secretariat	The ICAO Secretariat will share the exact date, venue, and detailed agenda information about the “CRV data requirements for SWIM Workshop” as soon as it is finalized	ASAP	Open	Proposed date: 19 August week. Will be finalized in 7 March Meeting	Propose to close
12-23	ICAO Secretariat, Co-Chairs	CRV OG Co-Chair (Pacific) suggested sharing the Proof of Concept test document of CRV with SWIM TF to understand CRV's performance and capabilities by SWIM TF	1-Feb-24	Open	Shared with SWIM TF on 6 Feb 2024	Propose to close
12-24	ICAO Secretariat, Co-Chairs, PCCWG	The Meeting requested that the ICAO Secretariat and PCCWG continue their efforts to reach relevant parties to progress the work on CRV-REDDIG II and CRV-New PENS interconnection	CRV OG/13	Open		
12-25	CRV OG	During the new CRV contract management process, CRV OG will incorporate the clause of interconnection with other regional networks into the contract document	CRV OG/13	Open		Propose to close
12-26	CRV OG Ad-hoc Expert Group, ICAO Secretariat	The CRV OG Ad-hoc Expert group prepare use cases for regional interconnection of CRV	CRV OG/13	Open		
12-27	CRV OG Ad-hoc Expert Group, ICAO Secretariat	Ad-hoc group continue to work to support and encourage MID states to work with PCCWG to join CRV, with the support of the ICAO APAC Secretariat and the ICAO MID office, to implement CRV in the MID region	CRV OG/13	Open	Email sent to orgnaise a day event with MID AMC STG/9 to MID office on 29 Jan	Propose to close
12-28	CRV OG	As the security assessment of CRV is essential and crucial for determining the security and trust of the APAC regional network, the Meeting agreed to incorporate this task in the new CRV contract management process	CRV OG/13	Open		Propose to close