

International Civil Aviation Organization

ICAO

**Ninth Meeting of the Common aeRonautical Virtual  
Private Network Operations Group (CRV OG/9)**

Video Teleconference, 25 – 27 January 2022

**Agenda Item 12:** Review ToR and update Subject/Task list of CRV OG**REVIEW ToR AND SUBJECT TASKS OF CRV OPERATIONS GROUP**

(Presented by the Secretariat)

**SUMMARY**

This paper presents current ToR and Subject Task list of CRV Operations Group 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 Operations Group.

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

1.3 The development of various actions items for this group has initiated since CRV OG/1 which was consolidated as Action List during CRV OG/2 and renamed as Subject Task list in CRV OG/5.

**2. DISCUSSIONS**

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 Terms of Reference of CRV OG including amendment to the title of CRV (the Common aeRonautical VPN), to undertake continuous CRV service improvements for future needs etc. and agreed the Decision CNS SG/23/2 (ACSICG/6/2 - CRV OG/5/1) - *Revised Terms of Reference of CRV OG*. The adopted ToR of CRV OG by CNS SG/23 is provided in **Appendix A** to this paper.

2.2 The Subject Task list for CRV OG was reviewed and updated by CRV OG/8 meeting in May 2021 is provided in the **Appendix B** to this paper.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) review the ToR of CRV OG provided in **Appendix A** to 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.

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**Common Regional 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) Manage issues arising from the transition with CRV TF, if any;
- c) Co-ordinate and standardize the establishment or upgrade of CRV services as required;
- d) Co-ordinate activities with other 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 seamless ATM 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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SN	Reference	Who	What	Due date	Status	Completed on	Result	Comment
1	1-1	ICAO RO	After inclusion by ICAO TCB of the revised budget and procurement clauses, ICAO Regional Office to send an ICAO State letter to all Pioneer States in order to propose the draft of revised annex 1 for acceptance. <b>CRV OG/6 made Decision OG/6/3 to develop SOW for the concrete proposal.</b>	20 February 2017  1/22/2022	Open		The revised Annex 1 had been developed in CNS SG/21 report but no concrete proposal.	CRV OG/2 has agreed to first explore the possible solutions through a small working group - action postponed to 1 Dec 17. The TCB expects more concrete proposal for the 2nd phase. OG chair seeking comments from pioneers states for be reviewed at CRV OG/6 meeting
2	1-2	All member States	All States to complete their CBA and se	28-Apr-17	close	CRV OG/6	CBA by DSNA, Jordon, UAE, Behrain, Saudi, Egypt, Bhutan, New Caledonia, Myanmar, Fiji, Malaysia	Not all CBA have been received by CRV OG/2 - action postponed to 1 dec 17 (CRV OG/3) Not all CBA have been received by CRV OG/2 - action postponed to 1 dec 18 (CRV OG/5) Not all CBA have been received by CRV OG/4 - action postponed to 10 May 19 (CRV OG/6)
3	1-3	Terence Palmer, Australia	Australia to include provisions in the CRV-OG operating manual for a small implementation team	1-Dec-17	close	CRV OG/7		<b>CRV OG/5:</b> Need to confirm whether the small implementation team is still required after its two meetings had been conducted. The draft COR Operating Manual has been posted to CRV OG/6 for review. <b>CRV OG/06:</b> No record <b>CRV OG/07:</b> Item removed from the list
4	2-1	Vaughan Hickford, New Zealand:	to develop the flowchart to manage change requests to the common provisions and establish agreements between counterparts on CRV and integrate those flowcharts in the CRV Operating Manual	7-Jul-17	close	CRV OG/7	CRV Operating Manual	Flow chart had been developed by CRV OG/4 and it will be included in the CRV Operating Manual. <b>CRV OG/6:</b> Identify sections where to be inserted? <b>CRV OG/7:</b> No record
5	2-2	Tom Beschler, USA	to share the 10 key points of the validation of the pioneer implementation once they are agreed on	30-May-17	close	1-Apr-18		
6	2-3	all points of contact for the review of engineering	to submit their comments to husnaeen@icao.int at their earliest convenience but no later than 7 July 2017	7-Jul-17	close	CRV OG/3		
7	2-4	Vaughan Hickford, New Zealand:	To review the procedure to establish a contract with PCCW Global, Ltd and present it as a flowchart to be included in the CRV operating manual	30-May-17	close	CRV OG/3	CRV Operating Manual	
8	2-5	Augustine Lau, Singapore:	To include the updated CRV Implementation schedule into the v0.5 of the implementation plan and circulate the v0.5 to all participants for acceptance	30-Aug-17	close	1-Apr-18	CRV Implementation Plan	

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SN	Reference	Who	What	Due date	Status	Completed on	Result	Comment
9	2-6	USA/Hong Kong China/New Zealand/Secretari at	To propose a way forward regarding the MSA	1-Dec-17	Open			Realloted as action item 4-4  Meeting of 15 Nov 2021 for outstanding conclusion recommended to revise Decision OG/6/3 and add global interconnectivity a proposed task
10	4-1	All member States	Complete contract with PCCW Global by no later than 12/2020	12/31/2021	Open	on-going		Report on the status at each CRV OG meeting & update the CRV Implementation status table  Pakistan contacted to get more information. Contact estb with PCCWG
11	4-2	ICAO Secretariat	Conduct CRV OG/6 and SWIM TF currently for joint development SWIM Architecture based on construciton of CRV	8-May-19	close			It has been coordinated and the meetings are scheduld in May 2019- COMPLETED
12	4-3	PCCW Global & Member States	PCCW Global to reissue an updated (a)-1 Terms and Conditions on starting and ending dates of initial contract. States to note the changes and take necessary action in the contract.	1-Dec-18	close	CRV OG/7		CRV OG/5: The contracts with States are still being processed
13	4-4	CRV OG co-chair (Asia) and & poineer CRV member States	To investigate use the MSA funds to undertake the independent satety assessment and seek approval from Pioneer States	27-Jan-22	Open			same as item 2-6  Meeting of 15 Nov discussed to revise Appx D of conclusion and will be presented to CRV OG/9
14	4-5	New Zealand	Further develop and maintain an additional CRV portal for use by the APAC CRV members and provide access procedure to those members	Apr.19	close	CRV OG/5		CRV OG/5: COMPLETED, New Zealand to provide updates.
15	4-6	New Zealand	Finalize the draft CRV Operations Manu	Apr.19	close	CRV OG/7	Conclusion CNS SG/24/4 - Publishing of CRV operational manual to provide the information and directions required for CRV OG performance and CRV operations	CRV OG/5: Progress updates; Draft to be ready for reviews by CRV OG/6 meeting 2019.  SL Ref.:T 8/9.1 – AP262/20 (CNS), 22 December 2020, Subject: <i>The availability of various regional guidance materials for implementation of Air Navigation Facilities and Services in the Asia and Pacific Regions</i> , Conclusion CNS SG/24/4 - Publishing of CRV operational manual to provide the information and directions required for CRV OG performance and CRV operations
16	4-7	USA	Develop a WP on AMHS over IPS protocol only for BBIS	1-Jun-18	close	CRV OG/5		

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SN	Reference	Who	What	Due date	Status	Completed on	Result	Comment
17	5-1	Australia, Hong Kong China and Japan	Prepare a working paper for SWIM TF/3 meeting on the CRV support for SWIM	30-Apr-19	close	SWIM TF/3	<b>SWIM TF/3: (7-10 May 2019)</b> <b>WP/06</b> - APAC Regional SWIM Implementation Options ; <b>WP/20</b> - Network Capability and Security of CRV in Carrying SWIM Data; and <b>WP/05</b> - SWIM-Enabled MET Information Services Developed by Hong Kong China;	Inform SWIM TF about the Conclusion of CRV OG/5 on the relation between CRV and SWIM.
18	5-2	ICAO RO	Disribute a State Letter to inform States of POC result	15-Mar-19	close	6-Mar-19	<b>State Letter: Ref.: T 8/2.10 – AP025/19 (CNS), 6 March 2019,</b> Subject: Notification of successful result of the CRV Proof of Concept Testing and Urging earlier implementation of CRV in APAC Region	the ICAO Secretariat was requested to notify States/Administrations of the successful result of the Proof of Concept Testing carried out over the period from 7/1/2019 to 18/1/2019 by Pilot Project States (New Zealand, Australia, Fiji, USA and PCCW Global).
19	7-1	China, Nepal, PCCWG	Study on use of existing VSAT infrastructure linking with CRV	Jan-22	Open			Feasibility on use the existing infrastructure <b>email sent on 10 November 2021 to China and Nepal for coordiation and action</b>
20	7-2	PCCW Global & New Zealand	Pacific solution on inter-connection with PASNET, Feasibility for interconnection	May-22	Open			
21	7-3	Australia and New Zealand	Polishing draftt First CRV Operations Manual	May-20	close		<b>Conclusion CNS SG/24/4</b> - Publishing of CRV operational manual to provide the information and directions required for CRV OG performance and CRV operations	get it ready for endorsement and adoptpion <b>SL Ref.:T 8/9.1 – AP262/20 (CNS), 22 December 2020,</b> Subject: The availability of various regional guidance materials for implementation of Air Navigation Facilities and Services in the Asia and Pacific Regions, <b>Conclusion CNS SG/24/4</b> - Publishing of CRV operational manual to provide the information and directions required for CRV OG performance and CRV operations
22	7-4	PCCWG & USA,Australia	maintain APAC dial plan and posted on CRV OG portal	Jan-22	Open			consolidated by PCCWG and posted on the portal
23	7-5	AFSSP WG	encourging member states of CRV to participate	20-Jan-22	Open		State Letter Ref.: T 8/2.10: AP018/20 (CNS) Subject: 2020 APAC Aeronautical Fixed Service Safety and Protection Planning Working Group Meeting (AFSSP WG 2020), 16 January 2020	Inform Administration to participate and contribute The meeting of 2020 postponed till further notice <b>The meeting is cancelled, proposed to close</b>
24	7-6	Hong Kong China	SWIM demonstration over mini-CRV by HK, Singapore and Thailand	1-Jan-22	Open			present the outcome of the demo to ACSICG/7 and SWIMTF/4 Postponed due to COVID-19

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25	7-7	Australia and PCCWG	High level concept for inter-regional MP	21-Apr-20	close		WP/09: MPLS/IP BASED INTER-REGIONAL CONNECTION, ICAO Sec	provide initia proposal at AFSSP WG
26	7-8	PCCWG & Australia, Fiji	Charging structure for an ANSP service provider on surveillance	20-Mar	Open			as soon as possible for cba comparison  Will this require a paper to presented in the next meeting.
27	7-9	ICAO RO, Australia and USA	State letter to States to remind joining CRV	Mar-20	close		Ref.: T 8/2.10 - AP041 /20 (CNS) Subject: Reminder for implementation of Common aeRonautical VPN (CRV) in APAC Region by 2020, 2 March 2020	late comer may compromise the benefits
28	8-1	Co chairs, ICAO RO, USA, PCCW	CRV webinar	20-Jul-21	Open	20-Jul-21	The webinar was conducted successfully on 20 July 2021	Promote CRV implementation
29	8-2	ICAO RO, USA, HKCAD	Timeframe for CRV supporting SWIM	Jan-22	Open			Explore a timeframe for CRV planning to support SWIM  Action 8-2 has been completed as we already concur CRV to carry SWIM traffic. The timeframe is dependent on SWIM implementation. Propose to close
30	8-3	Bhutan, Hong Kong China, Singapore, India, Thailand, USA, Co chairs, ICAO RO, concerned parties	Use CRV to support AMHS traffic for Bhutan	21-Jun-21	Open			As concerned BBIS in the process to implement CRV, Bhutan request to reroute its AMHS traffic through Hong Kong temporarily till CRV implemented in Mumbai or Bangkok.
31	8-4	ICAO RO, PCCW, co-chairs	State Letter to inform States about the additional charges may apply to new users with billing start date later than 31 December 2022.	Jan-22	Open		SL Ref.: T 8/2.10 – AP007/22(CNS) dated 12 January 2022  Subject: - To remind the target year of CRV Implementation by 31 December, 2022 in APAC Region and CRV Implementation for small Pacific Island and small ANSP in the region using CRV Solution, PCCWG SLA Package D	CRV webinar requested to extend the date by one year due to panedemic  Propose to close
32	8-5	Co-Chairs, ICAO RO, Singapore, USA	Continue the feasibility study on inter-regional connection to support business case analysis	Jan-22	Open			Meeting of Lumen and PCCWG are done on 4 November. PCCWG and Lumen will submit high level proposal by 15 december 2021
33	8-6	Fiji, PCCW	submit a paper to ACSICG/8	21-Jun-21	Open		IP/06: PRESENTATION OF PCCW NETWORK BASED IWXXM TRANSLATION AND EXCHANGE SERVICE	PCCW Network Based IWXXM Translation and Exchange Services Propose to close

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SN	Reference	Who	What	Due date	Status	Completed on	Result	Comment
34	8-7	USA, co chairs, PCCW, ICAO RO, concerned parties ( ad hoc)	Cyber threats protection for CRV	Jan-22	Open		ICAO Requirements propsoed in WP/32 of CNS SG/25: a) ICAO needs to provide an IPv6 dedicated address block b) ICAO needs to propose a Name Space and field a DNS c) ICAO needs to deliver IAFT recommendations for security including a Trust Framework for Digital Identities	Look for common minimum requirements on cyber protection for CRV users including available ICAO guidances and industrial standards.