



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

**FINAL REPORT OF  
TENTH MEETING OF THE COMMON AERONAUTICAL VIRTUAL  
PRIVATE NETWORK OPERATIONS GROUP  
(CRV OG/10)**

*Video Tele-Conference (VTC)  
(18 April 2022)*

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

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<b>HISTORY OF THE MEETING</b>	<b>Page</b>
Introduction.....	i-2
Attendance .....	i-2
Opening of the Meeting .....	i-2
Officer and Secretariat .....	i-2
Organization, Working Arrangement and Language .....	i-2
Conclusions/Decisions - Definition .....	i-3

### **SUMMARY OF DISCUSSIONS**

<b>Agenda Item 1:</b> Adoption of Agenda .....	1
<b>Agenda Item 2:</b> CRV contract management .....	1
– <i>Upgrade/Downgrade CRV Circuits Subscribed</i>	
– <i>Non-aviation providers joining CRV</i>	
– <i>Contract Extension</i>	
<b>Agenda Item 3:</b> Next meetings and any other business .....	3

### **LIST OF APPENDICES**

**Appendix A:** Action Items List

### **LIST OF ATTACHMENTS**

**Attachment 1:** List of participants

**Attachment 2:** List of working and information papers

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## 1. Introduction

1.1 The Tenth Meeting of the Common aeRonautical Virtual Private Network Operations Group of APANPIRG (CRV OG/10) was held on *18 April 2022* via video tele-conference.

## 2. Attendance

2.1 The meeting was attended by **89** participants from **21** Member States/Administration namely Australia, Bhutan, China, Hong Kong China, Fiji Islands, France, India, Indonesia, Japan, Malaysia, Mongolia, Nepal, New Zealand, Pakistan, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, USA, and Viet Nam, and 1 industry namely PCCW Global, Hong Kong, China. The List of participants is provided in **Attachment 1**.

## 3. Opening of the Meeting

3.1 The meeting was opened by Mr. Vaughan Hickford, Team Leader Network Design, Airways New Zealand, Co-Chair (Asia) and Mr. Kelepi Dainaki, Manager Air Navigation Engineering Services, Fiji Airport Limited, Co-Chair (Pacific). Mr. Vaughan Hickford welcomed all participants, recalled the achievement made in CRV OG/9, and explained the priority tasks that need to deal with by the CRV OG/10. He reiterated the significance of CRV OG/10 meeting for key decisions related to contract extension and upgrade/downgrade/addition of new services and site proposal for ACSICG/9 and CNS SG/26 further actions. Mr. Kelepi Dainaki also extended warm welcome to all participants and expressed deep appreciation and gratitude to the efforts of all parties to make great achievements and expressed his thanks to the all contributors. He shared his wishes to delegates and hoped for productive meeting.

3.2 Ms. Soniya Nibhani, Regional Officer, ANS (CNS) Implementation highlighted the value of CRV implementation in the region and its role for SWIM Implementation. She extended warm welcome to all participants and expressed deep appreciation and gratitude to the efforts of co-chairs and all parties in supporting the setting up of the CRV OG/10 on-line meeting without compromising the values to the air navigation implementation in States.

## 4. Officers and Secretariat

4.1 Mr. Vaughan Hickford, Team Leader Network Design, Airways New Zealand, Co-Chair (Asia) and Mr. Kelepi Dainaki, Manager Air Navigation Engineering Services, Fiji Airport Limited, Co-Chair (Pacific) co-chaired the meeting.

4.2 Ms. Soniya Nibhani, Regional Officer ANS (CNS) Implementation, ICAO Asia and Pacific Regional Office, acted as the secretary for the meeting with the support of Ms. Zhong Wenhan, Regional Officer, CNS.

## 5. Organization, Working Arrangements and Language

5.1 The CRV OG/10 met as a single body during the meeting. The working language for the meeting was English inclusive of all documentation and this Report. The meeting considered **Four (04)** Working Papers, **Two (2)** Information Papers, and **One (1)** Presentation, under its **three** agenda items. A List of Working Papers, Information Papers, and presentation is provided at **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***Adoption of Agenda- Sec (WP/01)*

1.1 The tentative agenda items presented in **WP/01** were adopted as agenda for the meeting.

**Agenda Item 2: CRV contract management***Proposal to Extend CRV Contract – Sec (WP/02)*

2.1 The paper presented the relevant outcomes of the first meeting of the ICAO CRV Steering Group to discuss the necessity of extending the current CRV contract and corresponding recommendations.

2.2 The CRV OG/9 meeting was informed that as per the current CRV contract, all Authorities shall join the CRV program and sign the relevant Service Contract(s) with PCCWG with the billing start date on or before **31 December 2022**. For authorities, which join CRV after 31 December, 2022, any additional charges may be imposed. The CRV OG/9 meeting debated the rationale to extend CRV contract, and agreed that it will base on States intention to join CRV.

2.3 As a follow up action of **ACTION ITEM 9-4**, the ICAO APAC Office issued a State Letter to request States/Administrations to share the intention to join CRV and its Tentative Timelines. In response, total **13** (thirteen) member states shared their intention to join CRV along with tentative timelines, including 10 (ten) States/Administration intend to join CRV by Q4 2022, 2 (two) States intend to join CRV after Q4 2022, and 1 (one) State has no plan yet.

2.4 To follow up **ACTION ITEM 9-5**, the first meeting of **ICAO CRV Steering Group** created by CRV OG/9 was held on **31 March 2022**. The meeting reviewed the responses received from Member States, discussed the requirement of additional efforts to support pacific Member States to join CRV, and advised to extend the contract duration for **one additional year**.

2.5 With aforementioned, the CRV OG/10 meeting formulated and endorsed the following Draft Conclusion for consideration by the ACSICG/9 meeting.

<b>Draft Conclusion CRV OG/10/01: Extension of CRV Contract for one year</b>	
<p>What: <b>a)</b> Recognizing that as per current contract, all authorities shall join the CRV project and sign the relevant Service Contract(s) with PCCWG with the billing start date on or before <b>31 December 2022</b> to not impose additional charges by the service provider and based on the survey responses of 2022, many Member States are in process to join CRV which may not be completed by December 2022, it is recommend to extend <b>current CRV contract for one year</b>.</p> <p><b>b)</b> If agreed to extend, as per amended CRV contract, all authorities shall join the CRV program and sign the relevant Service Contract(s) with PCCWG with the billing start date on or before <b>31 December 2023</b> to not impose additional charges by the service provider.</p> <p><b>c)</b> After the extension, the CRV contract expiry date will be <b>31 December 2028</b>.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: Several ICAO Member States have requested to extend CRV contract due to COVID-19 pandemic in CRV Implementation webinar held in 2021 and based on the response of the survey done in 2022, many Member States</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>

are in process to join CRV which may not be completed by December 2022.	
When: 18-Apr-22	Status: Draft to be adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

2.6 After endorsement and adoption of the proposed Draft Conclusion by ACSICG/9, CNS SG/26, and APANPIRG/33, ICAO Secretariat will inform Member States about the extension of the current contract on same Terms and Conditions.

2.7 Singapore queried for the rate for additional one year term after CRV contract extension. The meeting was informed that the current contract extension will be based on same terms and conditions and rates. After initial five years term, states may renew the CRV contract on yearly basis till expiry of the contract. However, States and PCCWG may negotiate bilaterally for better rate to renew the contract for more than one year. Nevertheless, the last date of contract cannot exceed CRV contract expiry date.

*Upgrade/Downgrade/Addition of New Services or Sites in CRV Contract – Sec (WP/03)*

2.8 The paper presented the relevant outcomes of the first Meeting of the ICAO CRV Steering Group for the discussion to upgrade/downgrade/addition of new services or sites into current CRV contract.

2.9 Considering Bhutan CRV post implementation issue raised on CRV OG/8, which further discussed by ACSICG/8, the meeting agreed that actions need to be taken to discuss this issue that States should have option to upgrade/downgrade the circuits based on the need as **ACTION ITEM 8-3**. WP/09 was presented by PCCWG in CRV OG/9 on the matter which proposed termination charges for States as well as mandate of five years term in case of upgrade/downgrade/addition of new services or site, which was not agreed by the meeting. Therefore, the **ICAO CRV Steering Group** was created to devise the terms and conditions for addition of new services, upgrade/downgrade of packages along with addition of new sites by contracted States into their contract.

2.10 In the first meeting of ICAO CRV Steering Group held on **31 March 2022**, PCCWG shared the revised proposal for upgrade/downgrade/addition of new sites and services with reasonable pre-estimate of the anticipated losses suffered by PCCW Global. The proposal was being presented by PCCWG in SP/01.

2.11 The revised proposal **withdraw cancellation charges and mandate of five years term** for each **upgrade** case and **addition of new sites/services**. Therefore, Member States may upgrade or add new sites or services in their contract without any additional charges or additional terms on the same rate. The revised proposal recommended to calculate **pre-estimate of the anticipated losses** suffered by PCCW Global by a proposed formula in case of **downgrade** and proposed to share the anticipated losses between PCCWG and States equally. Additionally, the mandate of five years term for downgrade cases was withdrawn. Therefore, Member States may downgrade the current package in their contract with additional charges of 50% of **the anticipated losses** but without additional term on the same rate.

2.12 The proposal was accepted by all members of CRV Steering group for submission to CRV OG/10 deliberation and agreement.

2.13 The meeting deliberated and reviewed the proposal submitted by PCCWG for upgrade/downgrade/addition of new services or site into current CRV Contract, and endorsed the proposal to work further for revision of relevant documentation of CRV common package.

2.14 CRV OG Chair (Asia) appreciated the support and contribution of ICAO CRV Steering Group members for presenting a pragmatic solution to the meeting.

2.15 India enquired when the presented proposal would be formally approved by PCCWG and reflected into relevant documentation of CRV common package. PCCWG informed that the formalization of the proposal would be ready tentatively by **May 2022**.

2.16 ICAO secretariat added that next ICAO CRV Steering group will review and discuss the phrasings of revised terms and conditions prepared by PCCWG in **July 2022**. The revised common package would be presented to CRV OG/11 for endorsement and approval. However, the presented proposal is applicable immediately after the endorsement by CRV OG/10 and ACSICG/9.

*Upgrade/Downgrade/Addition of New Services or Sites in CRV Contract – PCCWG (SP/01)*

2.17 PCCWG presented scenarios, illustrations, and formulas for various upgrade/downgrade options for member states' understanding.

**Agenda Item 3: Next meetings and any other Business**

*CRV OG Operations Manual- New Zealand (WP/04)*

3.1 New Zealand presented the status of the current draft of the CRV OG Operations Manual. The meeting was informed that since publication of the CRV OG Operations Manual in December 2020, there have been many updates including those coming from the Ad Hoc Group. The current DRAFT version of the Operations Manual is ready for publication as version 1.1. The updates in different sections were explained in detail in this paper.

3.2 CRV OG Co-Chair Asia presented and explained the revised Operational Manual to the meeting. The CRV OG Operational Manual can be accessed [here](#). It was added that member states can request access to the manual by requesting access to the portal by following the steps mentioned on [CRV Landing Page](#).

3.3 With aforementioned, the meeting endorsed the following Draft Decision for ACSICG/9 adoption.

<b>Draft Decision CRV OG/10/02</b> - Publication of the ICAO APAC CRV OG Operations Manual v1.1	
What: The current Draft of the APAC CRV Operations Manual is ready for publication following updates from the Ad Hoc groups.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: Ongoing improvements to the documentation supporting the APAC CRV network	Follow-up: <input type="checkbox"/> Required from States
When: 18-Apr-22	Status: Draft to be adopted by ACSICG
Who: <input type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: CRV OG and ACSICG	

3.4 CRV OG Chair (Pacific) shared his deep appreciation to CRV OG Chair (Asia) and all members of CRV OG Ad Hoc expert group for their contribution to enhancements of CRV OG

Operational Manual. CRV OG Co-Chair (Asia) shared his gratitude to the Ad Hoc expert group and mentioned that by Ad Hoc group's efforts, member states have a matured CRV OG Operational Manual.

*ICAO APAC Webinars: Implementation of CRV – Sec (IP/02)*

3.5 The ICAO Asia Pacific Implementation of CRV Webinar was held on 20 July 2021 via VTC with 121 participants from 18 States/Administrations, 2 airlines industries and a telecommunication provider. Total Four (4) presentations were delivered by CRV experts from New Zealand, Fiji, USA, and Hong Kong China. During the Webinar, Questions and Answers (Q & A) sessions were held at end of each presentation through the Pigeonhole tool. Throughout the Webinar, a total of 40 questions were asked and *more than 15 feedbacks* for the Webinar were provided by Participants with 100% positive responses.

3.6 The meeting was informed that based on Q&A sessions and submitted survey responses from Member States in the webinar, *the need for potential discussion with PCCWG* for extension of CRV Implementation deadline beyond the end of 2022 due to COVID-19 crisis as it is continued in 2021, the need for flexibilities in the package options selection by Member States, and the need for a platform for sharing lessons learnt and best practices based on experiences by Member States, which are using CRV, were felt. ICAO Secretariat has taken necessary action to address proposed feedbacks during the CRV OG/9.

3.7 The meeting was further informed about the ICAO APAC office has issued a state letter with Ref: **Ref O 7/1** dated **28 March 2022** on the subject ICAO APAC Webinars 2022 (April - December 2022). The state letter mentioned a series of 14 webinars being organised by ICAO APAC office on various topics. The information the webinar on **Implementation of CRV** on **29<sup>th</sup> June 2022** with its detailed agenda and program was also shared.

*Review of Action Items*

3.8 The meeting reviewed and updated action items due for CRV OG/10. The revised action item list is provided in **Appendix A** to the report.

*Date and Venue for the Next Meeting*

3.9 The meeting identified the need to organize face to face meeting, if possible, to further progress tasks listed in the Terms of Reference. The meeting agreed to organize next CRV OG meeting in **January 2023** in mixed mode. The mixed mode meeting will have options for face-to-face and VTC participation by member states. The Secretariat will take necessary action to issue the invitation letter to member States before three months as per the current practice.

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CRV OG/10  
Appendix A to the Report

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	Close	The revised Annex 1 had been developed in CNS SG/21 report but no concrete proposal.	Close as it will be covered in 4-4 (CRV OG/9)	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 send to ICAO APAC Office	28-Apr-17	Close	CRV OG/6	CBA by DSNA, Jordan, UAE, Bahrain, 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	
9	2-6	USA/Hong Kong China/New Zealand/Secretariat	to propose a way forward regarding the MSA	1-Dec-17	Close			Reallotted as action item 4-4 <b>Meeting of 15 Nov 2021 for outstanding conclusion recommended to revise Decision OG/6/3 and add global interconnectivity a proposed task</b>
10	4-1	All member States	Complete contract with PCCW Global by no later than 12/2020 <b>Complete contract with PCCW Global by no later than 12/2022</b>	12/31/2021 Dec 2022 ( in CRV OG/9)	Open	on-going		Report on the status at each CRV OG meeting & update the CRV Implementation status table <b>Pakistan contacted to get more information. Contact estb with PCCWG</b>

CRV OG/10  
Appendix A to the Report

SN	Reference	Who	What	Due date	Status	Completed on	Result	Comment
11	4-2	ICAO Secretariat	Conduct CRV OG/6 and SWIM TF currently for joint development SWIM Architecture based on construction of CRV	8-May-19	Close			It has been coordinated and the meetings are scheduled 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		<b>CRV OG/5:</b> The contracts with States are still being processed
13	4-4	CRV OG co-chair (Asia) and & pioneer CRV member States	To investigate use the MSA funds to undertake the independent safety assessment and seek approval from Pioneer States	1/1/2022 CRV OG/11 (in CRV OG/9)	Open		Depend on final fund decision from pioneer MS.	same as item 2-6 <b>Meeting of 15 Nov discussed to revise Appx D of conclusion and will be presented to CRV OG/9</b>
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 that wish to access the portal.	Apr.19	Close	CRV OG/5		<b>CRV OG/5:</b> COMPLETED, New Zealand to provide updates.
15	4-6	New Zealand	Finalize the draft CRV Operations Manual	Apr.19	Close	CRV OG/7	<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	<b>CRV OG/5:</b> Progress updates; Draft to be ready for reviews by CRV OG/6 meeting 2019. <b>SL Ref.:T 8/9.1 – AP262/20 (CNS), 22 December 2020,</b> Subject: <i>The availability of various regional guidance materials for implementation of Air Navigation Facilities and Services in the Asia and Pacific Regions, Conclusion CNS SG/24/4 - Publishing of CRV operational manual to provide the information and directions required for CRV OG performance and CRV operations</i>
16	4-7	USA	Develop a WP on AMHS over IPS protocol only for BBIS	1-Jun-18	Close	CRV OG/5		
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	Distribute 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	Close			feasibility on use the existing infrastructure

CRV OG/10  
Appendix A to the Report

SN	Reference	Who	What	Due date	Status	Completed on	Result	Comment
20	7-2	PCCW Global & New Zealand	Pacific solution on inter-connection with PASNET, Feasibility for interconnection	5/1/2022 Dec 2022 (CRV OG/9)	Open			
21	7-3	Australia and New Zealand	Polishing draft 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 adoption <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	Close			consolidated by PCCWG and posted on the portal
23	7-5	AFSSP WG	Encouraging member states of CRV to participate	20-Jan-22	Close		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	1/1/2022 CRV OG/11 (CRV OG/9)	Open		HK is conducting POC with PCCWG in terms of concept for sharing surveillance data (CRV OG/9)	present the outcome of the demo to ACSICG/7 and SWIMTF/4 Postponed due to COVID-19
25	7-7	Australia and PCCWG	High level concept for inter-regional MPLS/IP conn	21-Apr-20	close		<b>WP/09: MPLS/IP BASED INTER-REGIONAL CONNECTION, ICAO Sec</b> <b>WP/11: HIGH LEVEL NETWORK OPTIONS TO REDDIG, PCCWG</b>	provide initial proposal at AFSSP WG
26	7-8	PCCWG & Australia, Fiji	Charging structure for an ANSP service provider on surveillance	20-Mar	Close			As soon as possible for CBA comparison <b>IP/11 in CRV OG/09 addressed this action item</b>
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	Close	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	Close		Ad-hoc group created in CRV OG/9 for this task. Under action item 9-8	Explore a timeframe for CRV planning to support SWIM USA email 11 Nov: Action 8-2 has been completed as we already concur to carry SWIM traffic. The timeframe is dependent on SWIM implementation.

CRV OG/10  
Appendix A to the Report

SN	Reference	Who	What	Due date	Status	Completed on	Result	Comment
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	6/21/2021 June 2022 (CRV OG/9)	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	Close	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 pandemic	
32	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)	Open			Meeting of Lumen and PCCWG are done on 4 November. PCCWG and Lumen will submit high level proposal by 15 december 2021. WP/07 and WP/12 were presneted in OG/09.
33	8-6	Fiji, PCCW	Submit a paper to ACSICG/8	21-Jun-21	Close	Done in ACSICG/8	IP/06: PRESENTATION OF PCCW NETWORK BASED IWXXM TRANSLATION AND EXCHANGE SERVICE	PCCW Network Based IWXXM Translation and Exchange Services
34	8-7	USA, co chairs, PCCW, ICAO RO, concerned parties (ad hoc)	Cyber threats protection for CRV	Jan-22	Open	Need to review this action item in CRV OG/11	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.
35	9-1	All member States	The Member States would take some time to take reference of the ATN/AHMS Guidance Tree to review it and to provide the suggestion for modification in the ATN/AHMS Guidance Tree along with locating the position to add different CRV reference documentation.	CRV OG/11	Open			

CRV OG/10  
Appendix A to the Report

SN	Reference	Who	What	Due date	Status	Completed on	Result	Comment
36	9-2	ICAO Secretariat	ICAO Implementation Plan will be continued to upload on ICAO APAC e-documents portal. However, the information contained under Table-1, Table-2 and Appendix A and B would not be provided on the public portal. Under Table-1, Table-2 and Appendix A and B, a message would be added to refer to ICAO APAC CRV Secure portal or CRV Portal hosted by New Zealand to get required information along with the instructions needed	Jan-22	close		Done in March 2022	
37	9-3	Fiji, India, Japan, Singapore, New Zealand, USA, ICAO Secretariat, and PCCWG	<b>ICAO CRV Steering Group</b> comprised of Fiji, India, Japan, Singapore, New Zealand, USA, and ICAO Secretariat would devise the terms and conditions for addition of new services, for upgrade/downgrade of packages along with addition of new sites by contracted states into their contract	CRV OG/10 CRV OG/11	Open	Propose to extend till CRV OG/11		Meeting scheduled on 31 March 2022 WP/03 presented to OG/10 Next Steering Group meeting on 14 July 2022
38	9-4	ICAO Secretariat	ICAO APAC Office would send a State Letter to APAC Member States, who have not joined/not process to share their intention to join CRV and when they intend to do so.	Feb-22	Close		2022 Subject: - Request to share the intention to join CRV and its Tentative Timelines	
39	9-5	Fiji, India, Japan, Singapore, New Zealand, USA, ICAO Secretariat, and PCCWG	<b>ICAO CRV Steering Group</b> will discuss and finalise the requirements of current CRV contract extension based on feedback received from Member States who would join CRV in next few years	Mar-22	Close			Meeting held on 31 March 2022. WP/02 presented to OG/10
40	9-6	PCCWG	PCCWG is considering the current situation and will provide an official response if there is any contractual and commercial impacts for member states who sign the contract in 2022 but the installation date exceeds the standard lead time in 4 weeks to Sri Lanka, CRV OG Chairs, and ICAO Secretariat.	Feb-22	Close			Sri Lanka confirmed reception of reply on 18 April 2022 by email from Mr. Vidura.
41	9-7	ICAO Secretariat	In response to WP/18, ICAO Secretariat would present a paper to SWIM TF on behalf of CRV OG to inform about the relevant discussion in CRV OG.	May-22	Open			
42	9-8	CRV ad-hoc expert Strategy and Design group	CRV ad-hoc expert Strategy and Design group would join SWIM TF meetings to note important discussions related to CRV and to inform CRV OG about the relevant outcomes	CRV OG/11	Open	Add it into next ad-hoc expert group meeting on 10 March 2022		Added into 10 March 2022 meeting and informed to all member states of ad-hoc group.
43	9-9	CRV OG Chairs, ACSICG Chairs, SURSG Chairs, PCCWG, India, Singapore, and ICAO Secretariat.	A specialised meeting would be organised to discuss and devise a method for non-aviation service provider's joining process to CRV.  WP/17 by PCCWG for Non-aviation providers joining CRV should be also considered to discuss in the specialised meeting, which was supported by Singapore.	CRV OG/11	Open	Proposal sent for meeting from 30 May-3 June for choices by members on 21 March 2022  Final Meeting date is 2 June 2022		
44	9-10	APAC Member States	The meeting requested Member States to provide examples of activities under different categories provided in scope of supporting CRV Network as described in section 10.5 of draft report and scope of work defined in revised MSA	CRV OG/11	Open			
44	9-10	APAC Member States	The meeting requested Member States to provide examples of activities under different categories provided in scope of supporting CRV Network as described in section 10.5 of draft report and scope of work defined in revised MSA	CRV OG/11	Open			

CRV OG/10  
Appendix A to the Report

SN	Reference	Who	What	Due date	Status	Completed on	Result	Comment
45	9-11	New Zealand	Prepare the Terms of Reference (ToR) of Security and safety assessment of CRV	CRV OG/11	Open			

**The Tenth Meeting of the Common aeronautical Virtual Private Network Operations Group (CRV OG/10)**  
 (Video Teleconference, 18 April 2022)  
**ATTACHMENT 1**

**List of Participants**

	<b>STATE/NAME</b>		<b>TITLE/ORGANIZATION</b>	<b>TEL/FAX/E-MAIL</b>
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**The Tenth Meeting of the Common aeronautical Virtual Private Network Operations Group (CRV OG/10)**  
 (Video Teleconference, 18 April 2022)  
**ATTACHMENT 1**

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**The Tenth Meeting of the Common aeronautical Virtual Private Network Operations Group (CRV OG/10)**  
 (Video Teleconference, 18 April 2022)  
**ATTACHMENT 1**

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**The Tenth Meeting of the Common aeronautical Virtual Private Network Operations Group (CRV OG/10)**  
(Video Teleconference, 18 April 2022)  
**ATTACHMENT 1**

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**The Tenth Meeting of the Common aeronautical Virtual Private Network Operations Group (CRV OG/10)**  
 (Video Teleconference, 18 April 2022)  
**ATTACHMENT 1**

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**The Tenth Meeting of the Common aeronautical Virtual Private Network Operations Group (CRV OG/10)**  
(Video Teleconference, 18 April 2022)  
**ATTACHMENT 1**

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**The Tenth Meeting of the Common aeronautical Virtual Private Network Operations Group (CRV OG/10)**  
 (Video Teleconference, 18 April 2022)  
**ATTACHMENT 1**

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**The Tenth Meeting of the Common aeronautical Virtual Private Network Operations Group (CRV OG/10)**  
 (Video Teleconference, 18 April 2022)  
**ATTACHMENT 1**

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**The Tenth Meeting of the Common aeronautical Virtual Private Network Operations Group (CRV OG/10)**  
 (Video Teleconference, 18 April 2022)  
**ATTACHMENT 1**

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**The Tenth Meeting of the Common aeronautical Virtual Private Network Operations Group (CRV OG/10)**  
 (Video Teleconference, 18 April 2022)  
**ATTACHMENT 1**

	<b>STATE/NAME</b>		<b>TITLE/ORGANIZATION</b>	<b>TEL/FAX/E-MAIL</b>
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**The Tenth Meeting of the Common aeronautical Virtual Private Network Operations Group (CRV OG/10)**  
(Video Teleconference, 18 April 2022)  
**ATTACHMENT 2**

**LIST OF WORKING/INFORMATION PAPERS**

<b>WP/IP No.</b>	<b>Agenda Item</b>	<b>Subject</b>	<b>Presented by</b>
<b>WORKING PAPERS</b>			
WP/01	1	Provisional Agenda	Secretariat
WP/02	2	Proposal to Extend CRV Contract	Secretariat
WP/03	2	Upgrade/Downgrade/Addition of New Services or Sites in CRV Contract	Secretariat
WP/04	3	CRV OG Operations Manual	New Zealand
<b>INFORMATION PAPERS</b>			
IP/01	-	Meeting Bulletin	Secretariat
IP/02	3	ICAO APAC Webinars: Implementation of CRV	Secretariat
<b>PRESENTATIONS</b>			
SP/01	2	Upgrade/Downgrade/Addition of New Services or Sites in CRV Contract	PCCWG
<b>FLIMSIES</b>			

NIL

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