



ICAO

*International Civil Aviation Organization*

**Twelfth Meeting of the Common aeRonautical Virtual  
Private Network Operations Group (CRV OG/12)**

*Denarau Island, Fiji, 23-26 January 2024*

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**Agenda Item 9:** States CRV Implementation

**CRV Implementation Status and Future Plans in Japan**

(Presented by Japan)

**SUMMARY**

This paper presents the latest progress and future plans for CRV implementation in Japan.

**1. INTRODUCTION**

1.1 With the shrinking of International Private Leased Circuit (IPLC) services, which are point-to-point connections (legacy services), the Common aeRonautical Virtual Private Network (CRV) is an international network service that is the only solution for connecting Air Navigation Service Providers (ANSPs) within the APAC region.

1.2 Previously, Japan has successfully established AMHS/AIDC data exchange and voice communication connections with various Member States/Administrations using the CRV network.

1.3 However, in the future, it will be necessary to consider expanding the contracted circuit bandwidth of the CRV to accommodate the increase in AMHS data traffic and the implementation of SWIM services.

1.4 This paper presents the status of CRV implementation in Japan to date and future plans.

**2. DISCUSSION**

**2.1 Status of CRV Implementation in Japan**

2.1.1 Japan has separate connections to the CRV for data traffic (AMHS/AIDC) and voice traffic. This is to prevent simultaneous data and voice disruptions due to a single CRV circuit failure.

2.1.2 An overview of the CRV composition in Japan is shown in **Figure 1**.

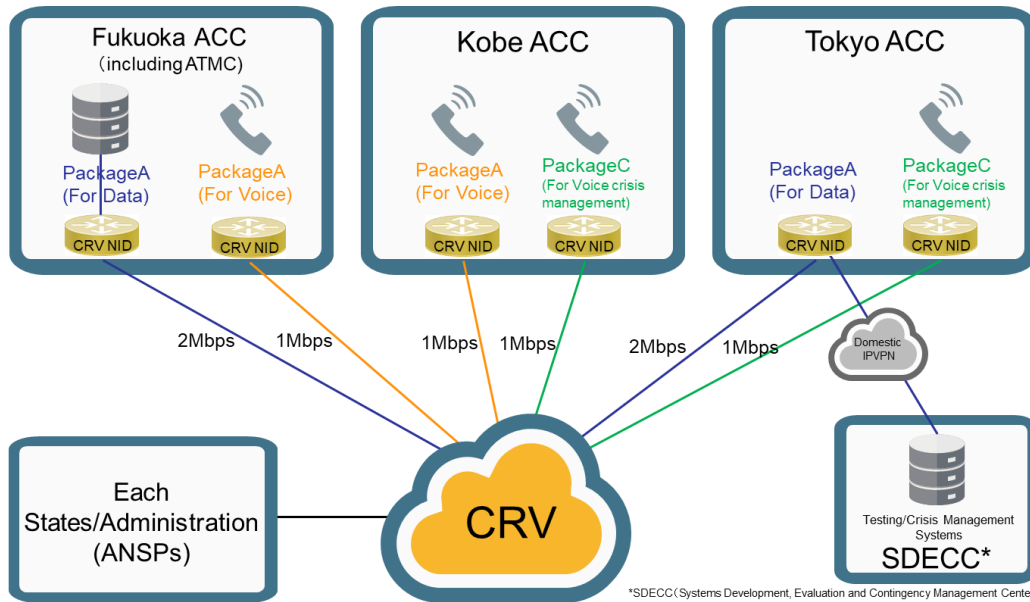


Figure 1. An overview of the CRV network composition in Japan

2.1.3 Japan has established a crisis management system for several Area Control Centers (ACC) and for the Systems Development, Evaluation and Contingency Management Center (SDECC). Backups related to communications with other Member States/Administrations are easily established using the CRV.

2.1.4 Previously, Japan has successfully used the CRV to connect AMHS/AIDC data exchange and voice communications with other Member States/Administrations, as shown in **Figure 2**. These connections have been in operation with each Member State/Administration without any problems so far. In the future, Japan hopes to expand connections with China (Shanghai) and Russia (Moscow/Khabarovsk) using the CRV.

State/Administration		Services	CRV Implementation	Remarks
China	Beijing	AMHS	○	
Hong Kong	Hong Kong	AMHS	○	
South Korea	Incheon	AIDC	△	under test process
		Voice	○	
	Daegu	Voice	○	
	Seoul	AMHS	○	
Philippines	Manila	Voice	○	
Singapore	Singapore	AMHS	○	
Taipei		AIDC	○	
		AMHS	○	
		Voice	○	
United States of America (USA)	Oakland	Voice	○	New crisis management line to TokyoACC in Japan under construction and coordination.
	Anchorage	Voice	-	Connection via Oakland
	Salt Lake City	AMHS (including AIDC)	○	

Figure 2. CRV Implementation Status of Japan

## **2.2 Future plans for CRV in Japan**

2.2.1 Currently, Japan subscribes to Package A, with 2 Mbps for data traffic (AMHS/AIDC). In the future, XML data traffic (IWWIXM) may be implemented in AMHS, in which case the contracted circuit bandwidth will need to be expanded. However, it is very difficult to accurately estimate the required bandwidth at this time.

2.2.2 In addition, it is highly likely that more contracted circuit bandwidth will be needed in the future to realize SWIM, which is under consideration, using the CRV. However, the specific data communication details to realize SWIM have not yet been clarified, and it is very difficult to accurately estimate the required circuit bandwidth at this time as well.

2.2.3 However, although the current CRV service has a defined price provided by PCCW up to 10 Mbps, it is very likely that circuit bandwidths of 10 Mbps or higher will be required in the future. This is an issue not only in Japan; it is highly likely that other Member States/Administrations will face similar problems.

2.2.4 From the above, it appears that when contracting with PCCW for bandwidth in excess of 10 Mbps, it will be necessary for the CRV/OG and PCCW to agree on a suitable price acceptable to each Member State/Administration, instead of determining the price separately between a Member State/Administration and PCCW.

## **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matter as appropriate.

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