



ICAO

*International Civil Aviation Organization*

**Seventh Meeting of the Common Aeronautical Virtual Private Network Operations Group (CRV OG/7)**

Bangkok, Thailand, 20 – 22 January 2020

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**Agenda Item 7:** Share best practices on cybersecurity and develop agenda items for joint session of ACSICG/CRV/SWIMTF on cyber safety/security and resilience

### **VOICE OVER IP DIAL TABLE UPGRADE**

(Presented by Federal Aviation Administration/USA)

#### **SUMMARY**

This paper presents a proposed plan to address the Voice over IP (Internet Protocol) dialing table used for communications between Japan and FAA.

## **1. INTRODUCTION**

- 1.1 The CRV operation has been initiated since January 2019 in Asia/Pacific and North American regions.
- 1.2 Air Traffic Service (ATS) voice communications is used to coordinate air traffic transfer between adjacent Flight Information Regions (FIRs).
- 1.3 CRV will provide infrastructure to host these voice services between Japan ATMC and the FAA.
- 1.4 PCCW Global (CRV's network provider) will perform IP digit manipulation between Japan and the FAA.
- 1.5 A comprehensive dial plan is required to provide to PCCW to ensure proper call routing.
- 1.6 Phone numbers for the various Air Traffic Controller positions in Japan and the FAA are required.
- 1.7 Adherence to ICAO dial plan format is necessary.

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**2. DISCUSSION**

2.1 Voice over Internet Protocol (VoIP) is a modern technology that allows phone calls to be made over digital IP networks. This technology provides increased accessibility, clearer voice quality, higher scalability, and ease of implementation.


2.2 Implementing VoIP into current CRV telecomm design requires Japan and the FAA submit information about dialing procedures performed by each entity and their voice switching equipment. These procedures will have dial sequences that will be translated between the two organizations using CRV network equipment.

2.3 Translation of digits should be transparent to Air Traffic Controllers.

2.4 ICAO has developed a format in which these translations should occur. An 8-digit numbering plan that looks like this:

- 1-3 digits will be for the Country Code/Area Identifier (AA) – E.164
- 2 digits will be for the ANSP Centre code (CC) – ANSP provided
- 3 digits for the operator position (OO) – ANSP provided

2.5 Recommend conclusion to support VoIP dial plan/table:

<b>Conclusion/Decision CRV OG/7 - Support the Joint meeting CRV OG and ACSICG</b>	
What: Develop VoIP Dial Table	 CRV Dial Plan Japan-USA 2019070!
Why: VoIP dial table required for proper call routing between Japan ATMC and FAA	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input type="checkbox"/> Ops/Technical
When: 20-Jan-20	Follow-up: <input type="checkbox"/> Required from States Status: Draft to be adopted by PIRG
Who: <input type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: XXXX	

**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 in your organization and plan to attend the meeting

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