

*International Civil Aviation Organization*

ICAO

**Eighth Meeting of the Common aeRonautical Virtual Private Network Operations Group (CRV OG/8)**

Video Teleconference, 17 – 19 May 2021

**Agenda Item 6:** Review and update the AMHS/ATN Implementation Status table and the APAC CRV Implementation Table

**KOREA NEW AMHS SYSTEM UPGRADE AND CRV IMPLEMENTATION PLAN****SUMMARY**

ROK introduce the New AMHS system upgrade plan and the CRV implementation plan.

**1. INTRODUCTION**

1.1 ICAO Asia/Pacific Regional Office formed CRV TF to establish and operate the Common aeRonautical VPN in the APAC regions, and encouraged all states/ Administrations to implement CRV through PCCWG by the end of 2019. Therefore, in the 23rd CNS/SG meeting, the target date of CRV implementation has postponed to 2021 due to Covid-19 Pandemic.

1.2 In the process, ROK tried to implement CRV under the Corona-19 pandemic, but the test with China and Japan was delayed, and this year (2021), the IOT using **Basic AMHS-CRV** conducted between Korea and Japan has failed. The failure was occurred by the Basic AMHS which is outdated, as the manufacturer said.

1.3 Therefore, in order to minimize the delay the exchange of IWXXM, and the implementation plan, Korea Airports Corporation has started a project to upgrade **Basic AMHS to Extended version**.

**2. DISCUSSION**

2.1 KAC has signed a contract with Frequentis (April-2021, Germany), a new AMHS (version 2) manufacturer, to complete the installation of HW and SW by the third quarter of 2021. By the plan, the POT with China and Japan will be held 4Q of 2021. In the third quarter of 2022, the stability of the new AMHS system will be fully verified through the trial operation with actual operating data, and afterwards, Korea plans to conduct a POT with Japan and China (4Q of 2022).

2.2 After successful POT in 4Q of 2022, Korea aims to switch from AMHS (Basic)/ATN to AMHS (Extended)/CRV between Korea-China. The following table represents the test and cutover schedule between Korea, China, and Japan based on the installation schedule according to the result of technical consultation with the Frequentis, and Korea asks for active cooperation to China and Japan.

States	IOT	POT	Cutover
China	Nov-Dec, 2021	Nov-Dec, 2022	Nov-Dec, 2022
Japan	Nov-Dec, 2021	Nov-Dec, 2022	Nov-Dec, 2022

2.3 If the new AMHS replacement is successfully completed in Korea, The messages will be exchanged stably through AMHS-CRV in 4Q of 2022. After securing the stability of AMHS-CRV, Korea expect that the old aeronautical networks, AFTN and ATN will be gradually removed. This will be implemented after the other country assure the stability of the new System.

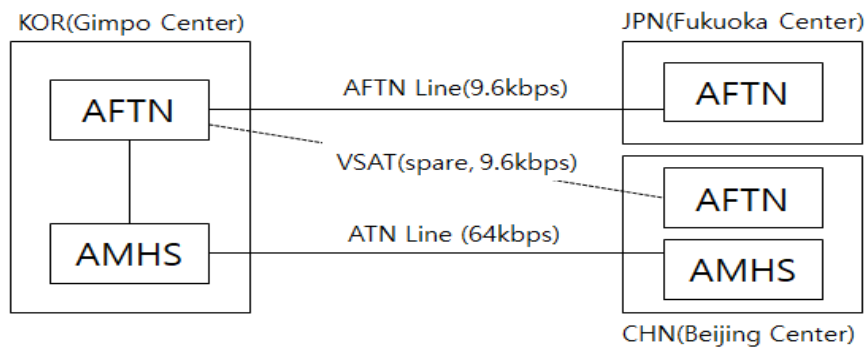


Figure1. Current International line with China, Japan

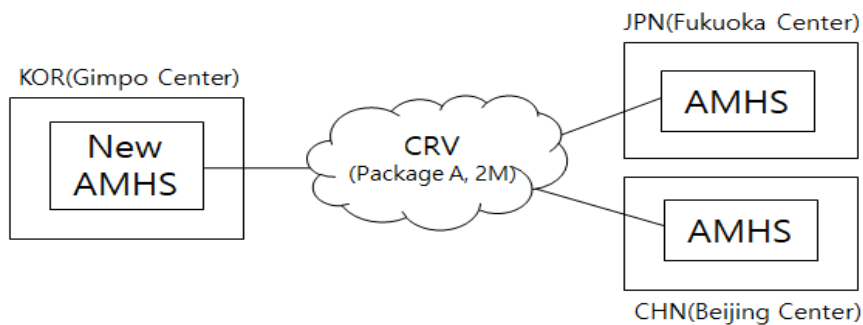


Figure2. International line after CRV cut-over

2.3 In addition, ROK has a plan to convert satellite communication networks between Korea and China to wired lines in parallel with CRV transition, and aims to switch to the wired lines by the second half of 2021. As a result, much cooperation from China is needed.

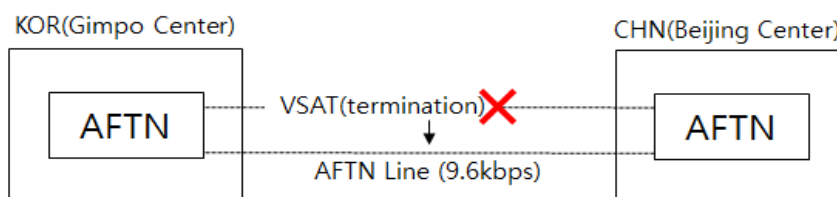


Figure3. AFTN Line after VSAT termination with Beijing

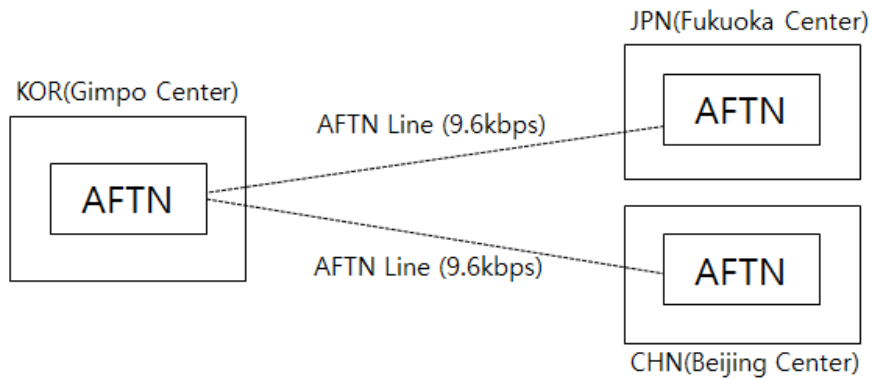


Figure4. AFTN Line (CRV's spare) after CRV cut-over

**3. ACTION BY THE MEETING**

- 3.1 ROK would like to share the AMHS (Extended) and CRV implementation plan; and
- 3.2 If you have any comments related to this, please let us know.

-----