International Civil Aviation Organization

Tenth Meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/10)

Bangkok, Thailand, 24 - 26 May 2023

Agenda Item 6: Review and update the AMHS/ATN/AIDC Implementation Status
6.1 AMHS implementation Status
6.3 AIDC Implementation Status

AIDC and AMHS Implementation Status in Republic of Korea

(Presented by Republic of Korea)

SUMMARY

This paper presents the implementation and operation of AIDC and AMHS in Republic of Korea.

1. INTRODUCTION

1.1 The Republic of Korea (ROK) would like to share the current status of Air Communication Services (AIDC, AMHS) currently in operation in the ROK in accordance with ICAO Global Navigation Plan and share operational issues.

1.2 With the transfer of air traffic control for the Corridor (A593) within ROK's Flight Information Region (Incheon FIR) is transferred to Korea, the ROK intends to establish ATS Inter-facility Data Communication (AIDC) between ROK-China ACC for a swift transfer of air traffic control and a prevention of human errors, thereby contributing to aviation safety.

2. DISCUSSION

AIDC implementation status between countries

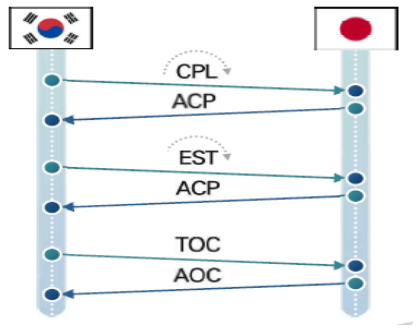
2.1 Currently, ROK is operating Incheon and Daegu ACCs within Incheon FIR, and AIDC with Dalian, China and with Fukuoka, Japan are in place.

Sector	Status	Date	AIDC Message used	Transmission means
Incheon – Dalian ACC	Operational	July 2018	ABI, EST, ACP, TOC, AOC, LAM, LRM	AFTN

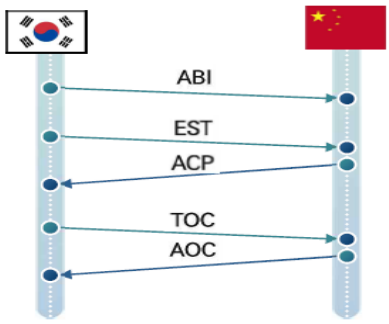
Incheon – Fukuoka ACC	Operational	Feb 2010	CPL, EST, ACP, TOC, AOC, LAM, LRM	Dedicated Line
Incheon – Sanghai ACC	Planned	2023 Q3	ABI, EST, ACP, TOC, AOC, LAM, LRM	AFTN

Figure 1. AIDC Implementation Status in ROK

2.1.1 AIDC CPL messages used between Korea and Japan are automatically sent 30 minutes before boundary arrival, and EST messages are automatically sent when boundary arrival time and altitude change above a certain standard. AIDC ABI messages used between Korea and China are automatically sent 12 minutes before boundary arrival and EST messages are sent 6 minutes before boundary arrival.



Incheon – Fukuoka ACC



Incheon – Dalian/Sanghai ACC

Figure 2. AIDC Message Set

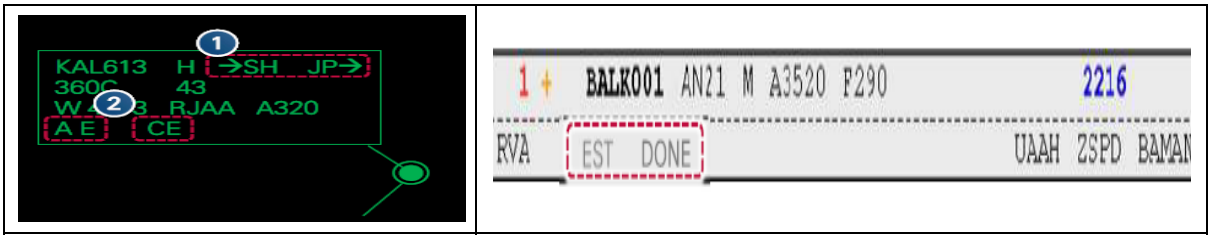
Incheon-Shanghai ACC AIDC implementation project

2.2 ROK has been carrying out AIDC establishment project since June 2022 to interlink Incheon ACC with Shanghai ACC, with the project scheduled to be completed in June 2023. The function test of the AIDC will be conducted in May.

Implementation Schedule (Incheon – Sanghai ACC)	
ICD determination	**23-May-23 ~**
AIDC interface	**23-May-23 ~**
Testing	**5-Jun-23 ~**
AIDC implementation	**27-Jun-23 ~**

Figure 3. AIDC Implementation Schedule

2.2.1 Considering the characteristics of the A593 route, which has a short air transit time, a new AIDC function that provides both Inbound and Outbound AIDC status in one Data Block was added.



AIDC Datablok	Inbound List

Figure 4. AIDC Function

AMHS implementation status between countries

2.3 The establishment of AMHS between Korea and China, and between Korea and Japan have been completed and been officially operated since January 2023 through CRV, with aeronautical information being exchanged normally.

2.3.1 As per the plan discussed at the 9th CRV meeting in 2022, ROK completed the POT with China through the newly-established AMHS Extended Version and successfully completed the IOT with Japan as well.

States	IOT	POT	Cut-Over
China	Completed (Dec 2021)	Completed (July 2022)	Completed (Nov2022)
Japan	Completed (Dec 2021)	Completed (Nov-Dec 2022)	Completed (Dec 2022)

Figure 5. AMHS implantation status

2.3.2 In addition, the project for the exchange of next-generation weather information (IWXXM) between ROK and China and between ROK and Japan under preparation.

2.3.3 The current status of CRV use for data/voice between ROK and China and between ROK and Japan is as follows:

Category	CRV contract	CRV bps	Current usage
AMHS(data)	Package A	2Mbps	10~20kbps
INCHEON ACC(voice)	Package C+	2Mbps	580~660kbps
DAEGU ACC(voice)	Package C+	2Mbps	480~550kbps

Figure 6. CRV status

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note and discuss the information contained in this paper with relevant countries as appropriate

– – – – – – – – – – – – –