



International Civil Aviation Organization

MIDANPIRG/21 & RASG-MID/11 Meetings

(Abu Dhabi, UAE, 4 – 8 March 2024)

Agenda Item 5.3: ANS (AIM, PBN, AGA-AOP, ATM-SAR, CNS and MET)

PROGRESS IN MIGRATING FROM AFTN TO AMHS SYSTEM

(Presented by Sultanate of Oman)

SUMMARY

This paper presents progress made by Oman in implementing more efficient, accurate and reliable ground-to-ground aeronautical communication services by migrating from AFTN to AMHS system aimed at meeting the ICAO strategic objectives, especially enhancing the safety and air navigation capacity & efficiency.

REFERENCES

- Annex 10, Vol. III – Aeronautical Telecommunications- Communication Systems
- Doc 9880, Part II – Ground-Ground Applications – Air Traffic Services Message Handling Services (ATSMHS) 2nd edition, 2016.
- The Aviation System Block Upgrades: The framework for global harmonization, July 2016

1. INTRODUCTION

1.1 AMHS plays a crucial role in enhancing aeronautical telecommunication, improving efficiency, and ensuring the secure exchange of aeronautical information such as Flight Plan and MET data.

1.2 ICAO ASBU Block B0/7 (COMI) recommends States implement AMHS to improve Ground/Ground communication and flight information coordination between ACCs at adjacent FIRs.

1.3 AMHS employs faster communication speeds compared to AFTN and offers enhanced flexibility in message transmission, accommodating attachments such as graphics. It also enables direct communication between ACCs of neighboring FIRs through data transmission, reducing reliance on voice communication.

2. DISCUSSION

2.1 Oman initiated AFTN to AMSH Migration Project in 2008, and putting its utmost efforts in a planned implementation of AMHS connectivity with neighbouring FIRs complying the ICAO SARPs mentioned in Annex 10, Vol. III.

2.2 The migration project activities basically included the following activities:

- Preparation of documents for testing and approval
- Technical testing of the channel.
- Operational testing to exchange different type of messages for both sides.
- Final administrative procedures for activation.

2.3 Muscat FIR is bordered by eight international FIRs, namely Abu Dhabi, Doha, Mumbai Jeddah, Bahrain, Karachi, Tehran and Sanaa which are interconnected through a Ground/Ground telecommunication network using either AFTN or AMHS.

2.4 Out of eight FIRs, 3 FIRs- Abu Dhabi, Doha and Mumbai are already connected by AMHS. Further connectivity with Jeddah FIR successfully tested and is in the process of implementation. Connectivity with Bahrain FIR is being tested, and with Karachi FIR is planned for testing soon. The status of implementation of Ground/Ground telecommunication network connectivity with the facilities of adjacent FIRs are given below:

ACC Facility	Ground/Ground Communication Network	
	AMHS	AFTN
Abu Dhabi	✓ (2009)	---
Mumbai	✓ (2022)	---
Doha	✓ (2022)	---
Jeddah	Test is successful, awaiting operational readiness from Jeddah side.	✓
Bahrain	Test is ongoing	✓
Karachi	Plan test- 2024 (Q2)	✓
Tehran	---	✓
Sanaa	---	✓

2.5 Oman plans to achieving 80% of its Ground/Ground communication via AMHS by 2025.

2.6 Major challenges faced during migration remained the following:

- Difficulty in coordination with adjacent FIRs to start the tests, and
- Delays in administrative procedures for final activation of the System.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

- a) note of the information contained in this paper;
- b) endorse the initiatives taken by Oman in migrating from AFTN to AMHS;
- c) discuss any relevant matters as appropriate.