



International Civil Aviation Organization

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**Eleventh Meeting of the Air Traffic Management Sub-Group
(ATM/SG/11) of APANPIRG**

Singapore, 2 – 6 October 2023

Agenda Item 5: ATM Systems (Modernization, Seamless ATM, CNS, ATFM)

AIDC TEST BETWEEN MUMBAI AND MUSCAT

(Presented by Airports Authority of India)

SUMMARY

This paper presents outcome of AIDC Testing between Mumbai and Muscat.

1. INTRODUCTION

1.1 The ATS Interfacility Data Communication (AIDC) is a datalink application that supports information exchanges between ATC application processes within automated ATS systems located at different ATSUs. This application supports the Notification, Coordination, and the Transfer of Communications and Control functions between these ATSUs. AIDC is one of the most important factor in mitigation of CAT-E LHDs.

2. DISCUSSION

AIDC Test Between Mumbai ACC and Muscat ACC

2.1 The plan to implement AIDC between Mumbai OCC/ACC and Muscat ACC has been going on for last few years since there are LHD hotspots at the Mumbai-Muscat FIR boundaries. However, the tests were unsuccessful due to technical reasons. Recently both the ATSUs engaged in AIDC again after removing the technical impediments.

2.2 Mumbai has a Raytheon Autotrack-3 ATM automation system which supports AIDC applications. Muscat has a INDRA Aircon ATM Automation system which also support AIDC applications. Both systems comply with APAC AIDC ICD version 3.0.

2.3 The following AIDC message type were tested. ABI, EST, ACP, AOC, TOC and message responses LAM, LRM. The tests were kept to more important messages. Other messages will be tested at a later stage.

2.4 The ABI messages from Muscat to Mumbai were rejected by Mumbai system due to a blank space in speed. This error can be fixed at a later stage.

IHA404 FF VABBAIDC 160626 OOMMAIDC 2.000006-4.230816062621- 5.912D- (ABI-TEST2/A4000-OMDB- RASKI/0644F350-VABB-8/IS-9/B738/M- 10/SWY/C-15/N 0481F350 VAXIM/N0481F350 L301 RASKI L639 MILUP-18/DOF/230816)	HIA790 FF OOMMAIDC 160626 VABBAIDC 2.000077- 3.OOMM000006-4.230816062617- 5.8163- (LRM-RMK/57/N 0481F350 VAXIM/N0481F350 L301 RASKI L639 MILUP)	REJECTED
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EST message exchanges were successful.

IHA572 FF VABBAIDC 160634 OOMMAIDC 2.000019-4.230816063442- 5.B9C4- (EST-TEST2/A4000-OMDB- RASKI/0644F350-VABB)	HIA848 FF OOMMAIDC 160634 VABBAIDC 2.000090- 3.OOMM000019-4.230816063439- 5.CF71- (LAM)	ACCEPTED
HIA849 FF OOMMAIDC 160634 VABBAIDC 2.000091-3.OOMM000019- 4.230816063441-5.A51C- (ACP- TEST2/A4000-OMDB-VABB)	IHA573 FF VABBAIDC 160634 OOMMAIDC 2.000020- 3.VABB000091-4.230816063446- 5.CF71- (LAM)	ACCEPTED

AOC and TOC were successful.

IHA439 FF VABBAIDC 160828 OOMMAIDC 2.000124- 4.230816082841-5.4FC2- (TOC- AXB252/A1721-OMSJ-VABB)	HIA793 FF OOMMAIDC 160829 VABBAIDC 2.000193-3.OOMM000124- 4.230816082900-5.497D- (AOC- AXB252/A1721-OMSJ-VABB)	ACCEPTED
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The message responses LAM and LRM were also successful.

Lesson Learnt

2.5 Earlier tests were unsuccessful due to the disruption of routing between Muscat AMHS and ATMS server when Muscat transitioned from AMSS to AMHS. The AIDC functioned properly when the routing was restored. Therefore, states should be careful when implementing new AMHS system.

2.6 The blank space in the aircraft speed is rendering ABI messages unsuccessful. Therefore, utmost care should be taken to follow the proper format in ATS messages.

2.7 It was difficult to coordinate through landline during the test. A social media group like a WhatsApp group facilitates the testing.

Future Course of Action

2.8 India and Oman will implement AIDC after few further tests. Some other messages may be tested also. Once decided, both ATSU will sign AIDC Letter of Agreement and a SOP. Trial operation with live traffic will be carried out with voice conformation initially. Thereafter, AIDC will be fully implemented. The implementation of AIDC is expected to remove the CAT-E LHD hotspots to a great extent.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and the efforts of both ANSPs
- b) discuss any relevant matters as appropriate.

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