International Civil Aviation Organization

Fifth Meeting of the Asia/Pacific Air Traffic Management Automation System Task Force (APAC ATMAS TF/5)

Chengdu, China, 5 – 7 June 2024

Agenda Item 7: ATS Inter-Facility Data - Link Communication (AIDC) Implementation Experience by States

PROGRESS OF AIDC IMPLEMENTATION IN SRI LANKA

(Presented by Sri Lanka)

SUMMARY

This paper presents the status of the AIDC implementation in Sri Lanka, the progress of implementation with adjacent ATSUs in 2024, and the related issues and suggestions encountered during the implementation.

1. INTRODUCTION

1.1 With consideration of regional requirement of better cooperative air traffic management with improved safety, Sri Lanka has prioritized the task of implementation of AIDC between adjacent ATSUs defined under ICAO Asia-Pacific Seamless ANS Plan.

1.2 Implementation of AIDC aims to reduce manual intervention and ground-ground coordination errors with automatic information exchange to replace voice communication between ATS units.

1.3 Colombo ACC ATCU had inbuilt AIDC function since 2013, but the implementation of AIDC electronic transfer with adjacent ATS units delayed due to issue of rejection of AIDC messages generated from Colombo ATCU.

1.4 In early 2024 ATMAS supplier upgrade the system software to resolve issues identified with AIDC-based electronic transfer function and restarted the testing of AIDC electronic transfer with adjacent ATS units.

2. DISCUSSION

Status of AIDC Implementation in Sri Lanka

2.1 By the end of first quarter of 2024, Sri Lanka's ATM automation systems are capable of the AIDC ICD V3.0 interface. Based on the beneficial effect of AIDC in improving efficiency, Sri Lanka plans to fully implement AIDC electronic handover with Chennai ACC-India & Male Acc-

Maldives before fourth quarter of 2024 s year and Melbourne ACC-Australia & Jakartha ACC-Indonesia by fourth quarter of 2025.

2.2 Sri Lanka's operation of AIDC links are via AMHS network. The AMHS connection to Mumbai AMHS system is migrated to CRV from dedicated IPLC in 2023.

2.3 For AIDC electronic handover, ten types of cores AIDC messages are in use in Colombo ACC i.e ABI, EST, CDN, ACP, TOC, AOC, MAC, REJ, LAM, and LRM. System is capable of handling PAC, TRU, FAN, FCN, ADS messages.

2.4 Sri Lanka completed the operational trials of AIDC between Chennai and Colombo. Meanwhile, Sri Lanka plans to start the implementation of AIDC between Colombo – Male by third quarter of 2024, Colombo – Melbourne and Colombo - Jakarta by 2025.

Colombo ACC and Chennai ACC AIDC technical test

2.5 The AIDC Trials were conducted for busiest FIR boundary entry and exit points between Chennai and Colombo Flight Information Regions. i.e BIKOK, SAGOR, DEMON, ATETA, DUGOS, BASUR, IDIBI, SULTO

2.6 The initial test trials have begun with Chennai in year 2013 with ATMAS system in Colombo ACC and Chennai ACC using links established via AMHS system connection between Colombo and Mumbai AMHS systems.

2.7 During the initial testing it is observed that except ABI messages from Colombo to Chennai, all the other AIDC messages exchange is successful in both ways.

2.8 Accordingly the issue is informed to system supplier of Colombo ATMAS, INTELCAN Techno system-Canada. Following issues were identified for rejection of ABI messages generated from Colombo ATMAS

i) The format of Flight Level Information of system generated ABI message is incorrect
E.g. System Indicated Flight level is BASUR459F0380 and as per ICAO ICD it should be indicate as BASUR459F380
ii) The route truncation is not included in auto generated ABI messages from Colombo ATSU. However, the message generated from Chennai ATSU with route truncation is accepted by Colombo ATMAS.
iii) The ABI message generated in Colombo ATMAS include more than 400 characters of Field 15 route information, and this causes rejection of ABI from Chennai ATMAS system.

2.9 These problems were corrected by the System supplier with software upgrade to Colombo ATMAS in April 2024 and operational trials were resumed. To fix the AIDC truncation matter and to reduce the length of field 15 route information, the supplier is advised to refer instructions given under AIDC ICD APPENDIX A.

2.10 Afterwards completion of successful operational trials with live traffic, the system supplier confirmed that the Colombo ACC now has technical capability to carry out AIDC handover with the Chennai ACC.

AIDC testing status with other ATCU

2.11 In 2013 initial test trials conducted with Maldives ATSU.AIDC connection established using AMHS/ATN between states. However, Testing was not successful due to rejection of ABI message generated from Colombo ACC. Subsequently completion of software upgrade restarts the testing with Maldives but unsuccessful. Maldives informed they are expecting their ATMAS supplier to perform few system modifications to restart the testing.

2.12 Initial testing with Melbourne ACC conducted in June 2023 but not successful. Melbourne informed they need to resolve some AIDC related functions identified during initial testing. Waiting for their preparation to recommence the testing.

2.13 Jakarta ACC informed they are not ready with AIDC testing.

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.

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