



*International Civil Aviation Organization*

**The Fourth Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/4) and the Twenty first Meeting of the South East Asian ATM Coordination Group (SEACG/21)**

Hong Kong, China, 24 – 28 February 2014

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**Agenda Item 4: Implementation of CNS/ATM Systems**

**ATN/AMHS AND AIDC IMPLEMENTATION**

(Presented by Airports Authority of India)

**SUMMARY**

This paper aims at reporting the current status of ATN/AMHS implementation in India and issues involved in the smooth transition to AMHS operational activities. This paper also summarizes the present status of AIDC implementation in India and related issues with adjacent ATSU's in the sub-region

**1. INTRODUCTION**

ATN/AMHS and AIDC Implementation

1.1 India implemented the AMHS having dual stacks ATN Router in Mumbai (Inter-Regional BBIS site) in April 2008. India implemented the AMHS and the circuit between Mumbai and Singapore had been operational since 23rd March 2011. India is continuously pursuing with other BBIS/BIS states for early AMHS implementation in line with regional and global plans for establishing AMHS network.

1.2 Airports Authority of India informed the meeting that it is in the process of implementing AIDC within ATC centers in India. The AIDC systems are using APAC AIDC ICD version 3 for AIDC and its implementation is being seriously pursued and extensive trials are being carried out between various automations systems showing successful results. Some of these airports are already exchanging live AIDC messages. During trials, several interoperability and operational issues were encountered between different ATS Automation Systems which have been mostly resolved. ICAO has recognized ATS Inter-facility Data Communications (AIDC) as an effective tool to reduce manual intervention and ground-ground coordination errors between adjacent ATS Units.

## 2. DISCUSSION

### ATN/AMHS IMPLEMENTATION STATUS:

2.1 Following the commencement of regular operation with Singapore, India is continuously pursuing with other BBIS/BIS states for early AMHS implementation in line with regional and global plans for establishing AMHS network. The present status of AMHS is appended as follows:

- **Mumbai-Beijing:** After successful completion of Pre-operational trails in July 2013, India has already forwarded the draft TMC to China for perusal and response awaited.
- **Mumbai-Bangkok:** Both India and Thailand successfully completed the Pre-operational trials. Following this, draft TMC were exchanged and agreed upon. Steps are being initiated to sign and exchange the TMC to commence regular AMHS operation before the end of Q4.
- **Mumbai-Karachi:** India and Pakistan (Karachi) has successfully completed Initial Operational Trial (IOT) in November 2010. Both states have completed the trial operation in 30 March 2012. AMC tables are required to be updated at Pakistan end to start pre- operational trials. Necessary response from Pakistan is awaited.
- **Mumbai-Muscat:** The circuit is presently operated on AFTN over TCP/IP through AMHS gateway. Oman Civil Aviation Authority has agreed to commence preoperational trials in the 3rd week of October 2013.
- Initial Operational Trial (IOT) on AMHS between **India and Nepal** is in progress. Meanwhile, draft TMC is being exchanged for mutual consent.
- Bangladesh has recently installed Comsoft AMHS system. Now, **India and Bangladesh** are taking initiatives to establish 64 KBPS leased line connectivity and commence the trials.
- **Sri Lanka** has recently contacted India to establish new circuit for AMHS connectivity. India is sharing its experiences with Sri Lanka for successful AMHS implementation,
- **Bhutan** has not yet communicated their implementation plan.
- **Kenya** as per communication received, the planned implementation is in July 2013. However, no further input is received and efforts are being made to coordinate with Kenya for early implementation.

### AIDC Implementation

2.1 India is in the process of implementing AIDC within ATC centres in India and has drawn up plans to establish AIDC with adjacent ATS Units of neighboring states in the sub-region.

2.2 India is one of the countries which have boundaries with adjacent ATSU's of APAC, MID and AFI Region states. There is a plan to establish AIDC with adjacent ATS units of different States viz. Bangladesh, Myanmar, Pakistan, Nepal, Seychelles, Malaysia, Indonesia, Sri Lanka, Kenya, Oman and Maldives but the plans and readiness of other states are presently not available. Therefore India urged neighboring Centers to share their plan with concerned states for an expeditious AIDC implementation in a time bound manner.

2.3 India has installed state-of-the art automation systems at most of the ATS centres. The systems are using APAC AIDC ICD version 3 for AIDC implementation. Presently automation systems in use by India are: Raytheon AutoTrac3 ATS Automation system at Mumbai and Delhi, Raytheon AutoTrac3 + ATS Automation system at Chennai, Selex ATS Automation system at Bangalore and Hyderabad and Indra AIRCON 2100 ATS Automation systems at 38 other ATC Centers including major airports like Trivandrum, Guwahati, Ahmadabad, Nagpur, Varanasi, Mangalore, Cochin and Amritsar airports.

2.4 Implementation of AIDC in India is being seriously pursued and extensive trials are being carried out between various automations systems showing successful results. Some of the above airports are already exchanging live AIDC messages. During trials several interoperability and operational issues were encountered between different ATS Automation Systems which have been mostly resolved. Some of the pending operational and technical issues are being examined and will be resolved shortly. The information exchanges in support of critical ATC functions within Automated ATS systems is being achieved via AFTN/AMHS networks. The trials have established that the existing AFTN/AMHS facilities in India are capable to handle/relay AIDC messages. Some of the links may require augmentation in terms of speed/additional circuit to cater for increased data load due to AIDC messages.

2.5 Though India is ready for early AIDC implementation, the plans and readiness of other states are presently not available. Success of AIDC implementation will depend on bilateral cooperation between concerned states. Moreover, there is a need for a standardized single ICD version within APAC region and all the regions of ICAO to achieve harmonious implementation. India requested ICAO to standardize single ICD version within APAC region and all the regions of ICAO to achieve harmonious implementation. Given the need to minimize the coordination errors, states involved are required to plan their activities concurrently and exchange and coordinate their plan and modalities bilaterally with concerned states to achieve harmonious AIDC implementation in the Region.

2.6 Air services Australia also has been in discussions with both Airports and Aviation Sri Lanka, and Maldives Airports Company Ltd, to commence AIDC testing. Initial testing will occur in 2013 on a non-operational test platform. Pending the success of these tests, an operational trial period will commence early 2014.

### **3. ACTION BY THE MEETING**

The meeting is invited to:

- a) to note the information contained in the paper
- b) urge states to share their plan with concerned states for an expeditious AMHS and AIDC Implementation in a time bound manner. and
- c) discuss any relevant matters as appropriate.

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