



*International Civil Aviation Organization*

**AMHS/SWIM SEMINAR AND THE SEVENTH MEETING OF  
AERONAUTICAL TELECOMMUNICATION NETWORK  
(ATN) IMPLEMENTATION CO-ORDINATION GROUP OF  
APANPIRG (ATNICG/7)**



Chiang Mai, Thailand, 5 – 9 March 2012

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**Agenda Item 3: Review States' ATN/AMHS Implementation Status, Transition and Operational Issues**

**AIRPORTS AUTHORITY OF INDIA ATN/AMHS IMPLEMENTATION  
STATUS AND ISSUES**

(Presented by India)

**SUMMARY**

This paper is a summary of current ATN/AMHS implementation status/operational activities/issues in India.

**1. INTRODUCTION**

1.1 India is one the leading states to implement ATN/AMHS in Asia/Pac Region. ATN/AMHS system was installed in Mumbai (BBIS) in April 2008. The system has dual stacks ATN Router to align with APAPIRG Conclusion 19/20.

1.2 This paper provides a summary of current status of ATN/AMHS implementation in India and its plan to implement IP-based domestic ATN/AMHS at three other major international airports in Chennai, Kolkata and Delhi.

**2. DISCUSSION**

2.1 The regular operation on AMHS interconnection between two BBIS states Singapore and India (Mumbai) commenced with effect from 23 March 2011. The performance of this circuit is satisfactory. To ensure synchronized operation, India and Singapore periodically update the AMHS Generic Address Lookup Table on mutually agreed dates.

2.2 To ensure efficient operation, the older version of the AMHS application software has been replaced with the latest version in the last week of Feb 2012. Besides upgrade to application software, additional software patches to provide import function of AMHS-AMC files as well as incorporation of New FPL-2012 Format to meet the implementation of ICAO Amendment-1 of PANS-ATM Doc-4444 have also been installed in the AMHS system.

2.3 With regard to AMHS interconnection with Beijing, China (BBIS), the interoperability test commenced on May 2011 by establishing SNDCF/X.25 connectivity. During the first round of bilateral test held in May 2011, difficulties were experienced regarding message conversion at either ends. Many pitfalls experienced during trials were resolved through mutual coordination. Following this, the second round of interoperability test was again conducted in September 2011. During this round, elaborate tests on submission, transfer and delivery of AFTN as well as IPM messages with different ATS-message-priorities were carried out between China and India. However, some of the problems pertaining to AMHS and AFTN generated message conversion still remain unresolved. India passionately invites the attention on following points:

- Since the system used at either ends are of different make, there is a requirement for both India and China to discuss the problems with concerned OEM. Accordingly, India could objectively discuss the hitches experienced during interoperability test with the OEM's software engineers who recently visited Mumbai to complete software upgrades of the system. In the presence of OEM's software engineers, attempts were also made to carry out interoperability test. However, the move was dropped, since IDRP/X.25 connectivity from China could not be established.
- India now expects that if interoperability test is again carried out, the hiccups on message conversion are likely to be automatically resolved due to upgraded software at this side. India appreciates the spirit of continued cooperation extended by China for expeditious commissioning of the circuit. Both the states will continue to coordinate with each other to carry out early interoperability tests and subsequent preoperational trials before commissioning.
- On the sidelines of this meeting, these minor problems of message conversion can be mutually discussed for better understanding. Since Hong Kong –China and Macau use the similar system that of India, they can also join the discussions and mutually exchange their experiences. This will help all the concerned states to commission the circuit in an expeditious manner.

2.4 In order to kick start the process of early ATN/AMHS implementation between India and Thailand, a high level team from Aeronautical Radio of Thailand (AEROTHAI) will visit Mumbai for 3 days from 28 March to 30 March 2012. During the meeting, both states are expected to have an elaborate discussion on the modalities of smooth ATN/AMHS implementation between Mumbai and Bangkok including signing of TMC.

2.5 India and Pakistan has successfully completed the interoperability test in November 2010. Since indication to commence preoperational test before commissioning AMHS interconnection between Mumbai, India and Karachi, Pakistan is not yet received from Pakistan, India has already written a letter to Director General- Civil Aviation Authority of Pakistan for signing the TMC and commission the link at the earliest. India is keenly waiting for readiness from Pakistan.

2.6 Though the circuit between Mumbai and Muscat (Oman) is presently operated on AFTN over TCP/IP through AMHS gateway, India is making efforts to coordinate with Oman Civil Aviation authorities for commencing regular AMHS trials at the earliest.

2.7. The status of ATN/AMHS implementation including readiness to commence interoperability test is still expected from Sri Lanka, Nepal, Bhutan and Kenya. India is ready to share its experiences to these states for early implementation.

2.8 In line with ICAO plan of supporting global harmonization of ATN over IPS as specified in DOC 9880, India has planned to implement domestic AMHS system at Delhi, Chennai and Kolkata using TCP/IP connectivity. Action for tendering process is in the advanced stage. The target date of completion will be 31 December 2012.

**3. ACTION BY THE MEETING:**

3.1 The meeting is invited to:

- a) note the updated information contained in this paper on ATN/AMHS implementation in India;
- b) request China and Pakistan to expedite action at their end for an early implementation of ATN/AMHS with India;
- c) request other BBIS/BIS states to implement ATN/ AMHS in an expeditious manner.

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