

International Civil Aviation Organization



**THE FIRST MEETING OF AERONAUTICAL  
COMMUNICATION SERVICE (ACS)  
IMPLEMENTATION CO-ORDINATION GROUP  
OF APANPIRG (ACSICG/1)**



Seoul, Republic of Korea, 13 - 16 May 2014



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**Agenda Item 4: Review States' ATN/AMHS Implementation Status, Transition and Operational Issues:**

**LESSON LEARNED FROM AMHS TRIALS AND TESTS**

(Presented by AEROTHAI Thailand)

**SUMMARY**

This paper presents the summary of issues discovered during the AMHS trials and tests performed by AEROTHAI technical and operational staffs with the aim to share with other parties.

**1. Introduction**

1.1 AEROTHAI has performed AMHS Inter-Operability Test (IOT) and Pre-Operational Test (POT) with neighboring countries during the 2<sup>nd</sup> half of 2013 and the 1<sup>st</sup> quarter of 2014. AEROTHAI's AMHS configuration includes two AMHS systems; the Ubitech system and AEROTHAI-developed system based on ISODE. We have performed the internal IOT between the two systems in order to test the setup of main site and disaster recovery (DR) site implementation. For IOT test, AEROTHAI insisted on testing both our AMHS systems with the test partner's AMHS system. The systems of our test partners are provided by COMSOFT, AVITECH and Thales.

**2. Discussion**

2.1 During the AMHS IOT and POT, AEROTHAI staffs have observed many issues. We have reported the issues to our vendor and our test partner's vendor and most of the issues have since been resolved by respective vendors. However some of the issues are still left open due to the fact that the usage of feature that causes the issue has not yet been specified, for example the usage of Carbon Copy (CC) field and Blind Carbon Copy (BCC) field. The following table summarizes the issues and their respective symptoms:

Issues	Symptom	Note
Probe issue	- Different encoding information type from different vender causing error and lack of probe response.	
Different format for 'Receipt Time' in the Read Notification generated by MTCU.	- 'Receipt Time' has value for 'seconds', which some MTA can not process. - 'Receipt Time' does not contain 'Z' alphabet at the end.	
Number of association for MTA connection	- Some MTA can only use 1 association while other can use multiple associations.	
Carbon Copy (CC) field and Blind Carbon Copy (BCC) field implementation issues	- Some MTA can only process message with CC and BCC, but can not retransmit the message. - Different implementation for messages in BCC field. Some MTA generates a new message with only addresses in BCC while others do not.	
Delay time caused by using VSAT link	- From MTA IOT and POT, the delay time using VSAT link is approximately 700 ms. Due to the delay time some of the tests had to be modified accordingly.	The delay of using VSAT is acceptable only in low traffic link.
AMHS addresses unknown in Location Indicator and AMC database	- There are many new AMHS addresses not presented in ICAO location indicator and AMC database.	

2.2 AEROTHAI would like to publish this information in hope that it will be of use for other organizations.

### 3. Action by the Meeting

3.1 The meeting is invited to:

- a) note the information contained in this paper,
- b) discuss any relevant matters as appropriate.

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