

International Civil Aviation Organization



**THE SIXTH MEETING OF AERONAUTICAL
TELECOMMUNICATION NETWORK (ATN)
IMPLEMENTATION CO-ORDINATION GROUP
OF APANPIRG (ATNICG/6)**



Seoul, Republic of Korea, 16 - 20 May 2011

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

SINGAPORE ATN/AMHS IMPLEMENTATION STATUS REPORT

(Presented by Singapore)

SUMMARY

This information paper provides the ATN/AMHS implementation status in Singapore.

1. INTRODUCTION

1.1 Singapore completed its AMHS system implementation in May 2008 (with Phase 1 for Operational System (OPS) & Phase II for Training cum Disaster Recovery system (TRG)). The ATN/AMHS implementation status report for Singapore can be found in Attachment 1 and 2.

2. ATN/AMHS CONNECTION

2.1 Under the ICAO ATN/AMHS implementation plan for the Asia Pacific Region, Singapore needs to establish BBIS links with Australia, India, Japan and Thailand and BIS links with Brunei, Indonesia, Malaysia, Philippines, Sri Lanka and Vietnam. Singapore also needs to implement the inter-regional ATN/AMHS connection with London (UK) and Bahrain.

2.2 In accordance to the above plans, Singapore started its first ATN/AMHS testing with Malaysia in 2007. Subsequently, in 2008, Singapore coordinated with Indonesia on the ATN/AMHS trial and good progress has been made since then. In late 2009, Singapore carried out the inter-operability trial with India and following the successfully completion of both the inter-operability and pre-operational trial, a new ATN/AMHS circuit between Mumbai (India) and Singapore was put into operation on 22 March 2011.

2.3 There was however no transition period from AFTN to AMHS for this new circuit; traffic intended for India was routed via the new connection immediately upon circuit commissioning. The alternate routing for this path would be via the Singapore – Colombo AFTN connection in accordance to the Asia/Pacific AFTN Routing Directory.

2.4 The inter-operability testing between Singapore and Indonesia is still on-going and efforts are being put in to operationalize this circuit in accordance to the ICAO Asia/Pacific ATN/AMHS implementation plan. Establishment of the inter-operability trials with Thailand has also been taken up after receiving readiness indication from Aerothai. Testing with London is also in the pipeline and VPN over internet may be used to reduce the waiting time for the physical connection to be made available.

2.5 Interconnection tests with other BIS and BBIS will be carried out on an availability basis when the neighbouring BBIS and BIS States are available for connectivity tests. These tests shall include the inter-operability and pre-operational tests in the guidance document for AMHS conformance testing.

3. ACTION TAKEN BY THE MEETING

3.1 The meeting is invited to note the progress for information.

Attachment 1

SINGAPORE ATN/AMHS IMPLEMENTATION STATUS REPORT

<u>Activities</u>	<u>Status / Schedule</u>
• Contract signed	– 4 th March 2006
• CDR (Design Review) completed	– Phase I: July 2006 Phase II: September 2007
• FAT (Factory Acceptance Testing)	– Phase I: November 2006 Phase II: March 2008
• Installation at Site	– Phase I: December 2006 to March 2007 Phase II: December 2007 to February 2008
• SAT (Site Acceptance Testing)	– Phase I: April 2007 to May 2007 Phase II: March 2008 to April 2008
• Training	– Phase I: December 2006 to May 2007 Phase II: April 2008 to May 2008
• Transition AFTN/AMHS	– End Jun 2007
• Final Acceptance Contract Signoff	– May 2008
• AMHS transition	– i) Singapore – India ATN/AMHS circuit was put into operation on 22 March 2011 ii) On-going inter-operability trial with Indonesia iii) Planning for inter-operability trial with Thailand and UK in 2 nd half of 2011. iv) Tests with other BBIS/BIS will be carried out on an availability basis once States are available for connectivity tests

- 2) Tentative date of completion of physical implementation (if physical implementation not completed): Not applicable

Procurement Status	Date/Tentative Date
Signing of contract	
Completion of Factory Acceptance Test	
Physical installation of system	
Site acceptance testing	
Training	
Availability of media (for the first circuit)	
Completion of testing (for the first circuit)	
Commissioning of operation (for the first circuit)	

- 3) Sub-net level protocol

If your State is using IP for

- 1) AFTN connectivity

Remarks: planning to implement for Singapore – Australia AFTN link

- 2) AMHS connectivity

- a. MTA/MTA

Remarks: IPS will be used for connection to EUR (i.e. Singapore – UK) and MID (Bahrain) region.

- b. MTA/UA
