International Civil Aviation Organization

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

Seoul, Republic of Korea, 16 - 20 May 2011

Agenda Item 9: **Review States' ATN/AMHS Implementation Status, Transition and Operational Issues**

ATN/AMHS IMPLEMENTATION STATUS REPORT

(Presented by India)

SUMMARY

This paper provides with up-to-date information about the status of ATN/AMHS implementation in India. As part of ATN Backbone Network connections in Asia Pacific Region, a major step has been recently achieved with the start of AMHS operational service between Mumbai & Singapore.

This Paper also submits possible interpretation differences between Doc 9705 Edition 3 and Doc 9880 related to the AFTN/AMHS Gateway.

1. **ATN IMPLEMENTATION ACTIVITIES**

1.1 In accordance with ICAO Asia/Pacific Regional Plans, Mumbai in India is one of the eight designated backbone sites of the Aeronautical Telecommunication Network (ATN) in Asia Pacific Region and to have BBIS connections with Singapore, Beijing & Bangkok.

1.2 India completed its AMHS system installation at Mumbai in April 2008 and has been taking up AMHS trials with neighbouring BBIS and BIS States as and when system availability information is received from them.

1.3 India and Singapore recently in Mar 2011 have successfully completed the agreement formalities and opertionalized the AMHS connection between them after elaborate preparation and comprehensive testing according to the guidelines of the ICAO AMHS Manual. The commencement of BBIS connection between Mumbai and Singapore is a significant step in the upgrade of messaging services to AMHS for the exchange of Flight Plans and other aeronautical message.

1.4 As regards other AMHS connections, interoperability tests between Mumbai and Beijing (BBIS) & between Mumbai and Karachi (BIS) are currently being carried out and will be completed in the second half of 2011.

1.5   While planning for system software upgrade of AMHS system at Mumbai, India has also planned to implement IP based AMHS system at Delhi, Chennai & Kolkata for which the process of tendering is being initiated. The ATN/AMHS implementation status report for India is found in Attachment 1.

1.6   Recently, in one of the test scenarios in the AMHS trials between Mumbai and Beijing it has been found that the AFTN messages addressed to an AFTN recipient at the other end were not being delivered to the AFTN addressee. However these messages were correctly delivered to the AMHS recipients when addressed. This indicates that there is a lack of identical processing for the messages received from AFTN at an AFTN/AMHS Gateway. On analysis one of the reasons has been attributed to the between possible interpretation differences between Doc 9705 Edition 3 and Doc 9880 related to the AFTN/AMHS Gateway in particular those on certain optional data fields and functions specified in these documents.

1.7   Although the ATN/OSI suite of protocols and applications is currently described in two documents Doc 9880 and Doc 9896 to replace ICAO Doc 9705, it is not clear if there are any specific differences between the detailed specifications between Doc 9705 Edition 3 and Doc 9880. In such cases different manufacturers may have different interpretations of the ICAO technical requirements which may impact the implementation at the states who have acquired AMHS systems that complied with ICAO Doc 9705.

1.8   It is also necessary that states that are implementing AMHS systems based on these Manuals to discuss and share their similar experience if any.

2.   ACTION REQUIRED BY THE MEETING

2.1   The meeting is requested:

(a)   to discuss the interoperability issue given above; and

(b)   to take note of the progress of AMHS implementation in India.

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ATTACHMENT 1

FORMAT OF IMPLEMENTATION STATUS REPORT

Contract signed – *May 2007*

CDR (Design Review) completed – *Jul 2007*

FAT (Factory Acceptance Testing) – *Nov 2007*

Installation at Site: – *Apr 2008*

SAT (Site Acceptance Testing) – *May 2008*

Training – *Jul 2008*

> ➢ Test schedule
>
> > ➢ Bilateral agreement worked out with reciprocal ends –
> > *Agreement with Singapore: Q2/2009*
> > *Agreement with Beijing: Q1/2010*
> > *Agreement with Karachi: Q1/2010*
> >
> > ➢ ,, Test carried out –
> > *Test completed with Singapore:Q3/2009-Q1/2011*
> > *Test ongoing with Beijing: Q1/2011,*
> > *Test ongoing with Karachi: Q1/2010*
> > *Test completed for AFTN over TCP/IP*
> > *with Muscat on AMHS G/W –Q1/ 2010*
>
> ➢ Transition AFTN/AMHS – *Karachi – TBD,Muscat-TBD*
>
> ➢ Setting up of AMHS UA's – *Currently two UA have been set up. Remaining UA will be set up progressively*
>
> ➢ Final Acceptance Contract Signoff – *Mar 2011*
>
> ➢ AMHS transition – *Singapore - Mar 2011, Beijing – TBD, Karachi - TBD,Muscat-TBD Other BBIS/BIS-Depends on availability of systems at reciprocal Ends.*

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ATN/AMHS IMPLEMENTATION STATUS

Name of the State : India

Name of the ATN/AMHS Station: VABB

Physical Implementation status

1)   Date of completion of physical implementation (if implementation completed): *15 May 2008*

Status of operational connectivity:

(Please provide the date of completion of the following steps or the tentative dates of completion if the steps have not been completed)

Reciprocal End Station	Media available on	MoU signed on	Testing completed on			Commissioning of operation on
			Physical Connection	Router Connection Test	MTA Interoperability Test	
WSSS	*Q3/2009*	*Q2/2009*	*Q3/2009*	*Q3-Q4/2009*	*Q3-Q4/2009*	*Mar 2011*
ZBBB	*Q1/2011*	*Q1/2010*	*Q1/2011*	*Q2/2011*	*On-going*	*TBD*
VTBB	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*
OPKC	*Q1/2010*	*Q1/2010*	*Q3/2010*	*----*	*On-going*	*TBD*
OOMS	*Already Avbl*	*Q4/2009*	*Q1/2010(AMHS G/W)*	*----*	*TBD*	*AFTN over TCP/IP from Q1/2010*

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