



ICAO

Eighth Meeting of Aeronautical Communication Service Implementation Co-ordination Group of APANPIRG (ACSICG/8)

Video Tele-Conference, 21 – 23 June 2021

Agenda Item 5: Review and update the AMHS/ATN Implementation Status

5.2 Report on the readiness status of AMHS to support IWXXM

SUMMARY ON ICAO ACTIONS TO FACILITATE IWXXM EXCHANGE OVER AMHS IN APAC REGION

(Presented by Secretariat)

SUMMARY

This paper presents the summary on ICAO actions to facilitate IWXXM Exchange over AMHS in APAC Region.

1. INTRODUCTION

1.1 ICAO APAC Region has been discussing and promoting the implementation of necessary infrastructure to support IWXXM exchange in the Region through APANPIRG and its contributory bodies. This paper summarizes the work done in the APAC Region to facilitate the IWXXM exchange over AMHS, which response to the Action Item of CNS SG/24.

2. DISCUSSION

2.1 Since the adoptions of Amendments 77 and 79 to Annex 3, the APAC Region has been discussing in APANPIRG and its contributory bodies on promoting the implementation of AMHS, a proper infrastructure identified for the Region to facilitate the exchange of IWXXM. The following summarizes the relevant Conclusions adopted in APANPIRG and its contributory bodies:-

2.2 APANPIRG/28 discussed that to meet the minimum requirement for the exchange of IWXXM messages, the meeting urged States/Administrations to implement Extended AMHS or Basic ATS Message Handling Service plus File Transfer Body Parts sub-set of extended AMHS for Binary data exchange (FTBP) functional groups as defined in Doc 9880 Part IIB section 3.4.1. Accordingly, the meeting adopted the following Conclusion:

Conclusion APANPIRG/28/16: Upgrade AMHS to support IWXXM traffic

What:

That, In order to support the requirement to exchange MET information in IWXXM format, States/Administrations be urged to

Expected impact:

- Political / Global
 Inter-regional

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upgrade AMHS systems (AMHS server and User Agent) by November 2020 to either Extended AMHS or Basic ATS Message Handling Service plus File Transfer Body Parts sub-set of extended AMHS for Binary data exchange (FTBP) functional groups as defined in Doc 9880 Part IIB section 3.4.1.		<input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: need to support IWXXM format data by AMHS	Follow-up:	<input type="checkbox"/> Required from States
When: 30-Dec-17	Status:	Adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:		

2.3 CNS SG/22 discussed the Draft Conclusion submitted by CRV OG/4 and discussed in ACSICG/5 that BBIS States/Administration were encouraged to commence the transition of AMHS to CRV network as early as possible to allow more BIS State/Administrations to establish connections over CRV. As such, the following Conclusion was adopted:

Conclusion CNS SG/22/4 (CRV OG/4/2) - ATN/BBIS States/Administration Use CRV for AFTN/AMHS Traffic		
What: That, States/Administrations with ATN/BBIS are urged to implement CRV network as early as possible, to provide AFTN/AMHS routing function for BIS Administrations.		Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: to ensure compliance with ICAO Doc. 9896	Follow-up:	<input checked="" type="checkbox"/> Required from States
When: 20-Jul-18	Status:	Adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:		

2.4 In last ACSICG/7 and CNS SG/24 Meetings, several States/Administrations shared the AMHS readiness and experience for supporting IWXXM Traffic. The APAC State Letter Ref.: T 8/3.5 & T 8/2.11– AP160/20 (CNS) was sent to States/Administration in August 2020 as a reminder to upgrade the AMHS with FTBP and deploy AMHS connect to achieve a synchronized AMHS distribution mechanism to support MET information exchange using IWXXM in the APAC Region. The AMHS readiness from States/Administrations was provided in Appendix G to the Report of CNS SG/24 meeting, which is captured as **Attachment** to this paper for ease of reference. States/Administrations are urged to expedite the update this **Attachment** in this ACSICG/8 Meeting for their readiness and implementation progress/plan of AMHS with FTBP as soon as possible.

2.5 CNS SG/24 Meeting requested the MET SG and CNS SG to enhance mutual coordination and sharing outcomes of related survey and seminar/workshop, and the contributory body of MET SG (Meteorological Information Exchange Working Group (MET/IE WG)) to work collaboratively with ACSICG for a way forward in APAC region.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information in this paper;
- b) review and update the AMHS Readiness Report for Supporting IWXXM Traffic table provided in **Attachment** to this paper;
- c) take actions according to State Letter Ref.: T 8/3.5 & T 8/2.11– AP160/20 (CNS)
- d) share issues and solutions of States/Administrations in implementing AMHS with FTBP to facilitate IWXXM exchange; and
- e) discuss any relevant matter as appropriate.

AMHS Readiness Report for Supporting IWXXM Traffic

No.	States/Administration	Name of State (Administration)/name of BBIS/BIS location where AMHS is installed:	AFTN/AMHS transition date/schedule	Readiness Status of AMHS for supporting File Transfer Body Part (FTBP), the Interpersonal Message (IPM) Heading Extension (IHE) to support for exchanging IWXXM reports of a maximum size of 4MB and FTBP of maximum 2MB:	Capacity status of the operational AFS links to support the exchange of the required meteorological information in both IWXXM GML form and TAC form:
1	Hong Kong China	Hong Kong China	December 2009	Support	2MB for CRV and 64kbps for IPLCs
2	Fiji	Fiji Airport/Air Traffic Management Centre	Completed. In June 2019, Fiji completed the transition of ATN BBIS to IPS for the AMHS service from Nadi to Salt Lake, USA & Brisbane, Australia over the CRV network. The local end User still operates on AFTN terminal and is converted to AMHS over the AFTN/AMHS Gateway.	The Comsoft AMHS System supports File Transfer Body Part (FTBP). Our system has the capability of exchanging IWXXM reports of a maximum size of 4MB and FTBP of maximum.	Nadi has contracted a 1.0Mbps bandwidth using CRV Package C+ for Voice & AMHS services. The total bandwidth usage for voice and data is 768K from the total 1.0Mbps. The bandwidth for AMHS is 64Kbps each to Brisbane & Salt Lake Center. It is noted in the ACSICG/7 WP04 presented by USA that 64Kbps is the minimum recommended required bandwidth for AMHS to exchange FTBP for IWXXM.
3	India	AAI/Mumbai Airport	AMHS is in operation since 2011	2MB: Mumbai AMHS is not able to receive AMHS messages with attachments, although Bangkok and Singapore sent the AMHS messages with attachment to Mumbai. India is planning a replacement of existing AMHS system within a timeframe of 2 years.	
4	Japan	Japan/Fukuoka	ATN BBIS router and AMHS installed at 2000.	Already support exchange of IWXXM messages based on FTBP in August 2015.	The viewpoint of line bandwidth, it will be 192KBps.

No.	States/Administration	Name of State (Administration)/name of BBIS/BIS location where AMHS is installed:	AFTN/AMHS transition date/schedule	Readiness Status of AMHS for supporting File Transfer Body Part (FTBP), the Interpersonal Message (IPM) Heading Extension (IHE) to support for exchanging IWXXM reports of a maximum size of 4MB and FTBP of maximum 2MB:	Capacity status of the operational AFS links to support the exchange of the required meteorological information in both IWXXM GML form and TAC form:
			<p>Connection tests with USA 2000-2004 and put into operational use in 2005 and over CRV in February 2019.</p> <p>Connection tests with Hong-Kong and Singapore using AMHS/FTBP over CRV since December 2019 and testing is still on-going.</p> <p>AMHS/FTBP over CRV implementation with China in 4Q2020, and with Korea in 1Q2021</p>	It is possible to send , receive and transfer up to 2,147,483,647byte for the contents such as FTBP,IPM and IHE.	
5	Macao China	Macao China	Q4/2009	Q3/2021	To be determined
6	Philippines	Philippines/ATMC Manila	Completed March 2018	Can support IHE and FTBP maximum 1MB (tested with Taipei on 13-May-20)	<p>1MB</p> <p>Philippines has contracted 2Mbps bandwidth using CRV package "A" voice and data services.</p>
7	Republic of Korea	Gimpo international airport	<p>ATN/AMHS with China put into operational use in June, 2011.</p> <p>AMHS implementation with China and Japan over CRV will be in 4Q, 2022.</p>	AMHS implementation for supporting FTBP and IHE will be in 4Q, 2022.	AFS links over CRV is a Package A, Bandwidth 2M.
8	Singapore	Singapore	March 2011	Yes	2MB for CRV and minimally 64kbps for IPLCs