International Civil Aviation Organization
North American, Central American and Caribbean Office

WORKING PAPER

ANI/WG/3 — WP/13
22/03/16

Third NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/3)
Mexico City, Mexico, 4 to 6 April 2016

Agenda Item 4: **Follow-up, Performance Evaluation and Monitoring of the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) Targets**
4.1 Progress Reports of the Task Forces and the ANI/WG

PRELIMINARY PROGRESS REPORT BY AMHS TASK FORCE

(Presented by AMHS Task Force Rapporteur)

EXECUTIVE SUMMARY	
This Working Paper presents the latest update on the work carried out by the Aeronautical Message Handling System (AMHS) Task Force.	
Action:	Suggested actions are presented in section 3.
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency • Security & Facilitation • Economic Development of Air Transport • Environmental Protection
References:	• Second NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/2), Punta Arenas, Costa Rica 1-4 June 2015 Report • AMHS Task Force Teleconferences

1. Introduction

1.1 The Aeronautical Message Handling System (AMHS) Task Force was formed in order to streamline activities related to air navigation implementation activities. Implementation of AMHS shall be completed in accordance with the Regional AMHS Implementation Plan.

1.2 Since the last ANI/WG/2 Meeting held in Punta Arenas, Costa Rica on 1 to 4 June 2015, and after the successful transition from MEVA II to MEVA III in the Central Caribbean, transition process has improved.

2. Discussion

2.1 During the abovementioned ANI/WG/2 Meeting, the IPv4 addressing scheme for the Caribbean was amended and approved as Version 1.1. (**Appendix**). Since last Meeting, States have been conducting interoperability testing such as Cayman Islands, Cuba, Trinidad and Tobago and Sint Maarten. This Version 1.1 will be applied to all the remaining States.

2.2 As part of the Factory Acceptance Testing (FAT) during the MEVA III deployment, Cuba worked with the United States to assure the suitability of the system for AMHS traffic. Using a 64kbps synchronous serial connection between Havana and Atlanta, AMHS messages were continually exchanged for an extended period of several hours without issue.

2.3 With the increased activity in AMHS interoperability testing following MEVA III implementation, topics have been identified which might be addressed by Go Teams in preparation for future States' implementation activities:

1. Router equipment should be deployed to support IP links between States and provide a gateway to a private Local Area Network (LAN) hosting AMHS Message Transfer Agent (MTA) (and other) equipment. Expertise identifying this equipment and designing a private LAN is sometimes required.

2. States are expected to provide MTA host IP addresses conforming to the ICAO IP addressing scheme adopted by the CAR/SAM Regions (http://www.icao.int/NACC/Documents/eDOCS/CNS/NAMCAR-IPv4AddressingSchemeFinal.pdf). A single IP address identifying redundant AMHS MTA equipment is desirable. Expertise for the configuration of Network Address Translation (NAT) and associated router configurations is sometimes needed.

3. AMHS interoperability testing is often necessary using the same equipment currently providing operational AFTN traffic. In this case, extreme care must be taken to ensure that AMHS test messages do not 'leak' into the operational AFTN network. Careful review of test scenarios and address routing configuration is needed.

4. Prior to AMHS cutover, it is often desirable to duplicate operational AFTN traffic in a parallel non-operational AMHS traffic stream. This provides an environment for operator training and other pre-operational development activities. Investigation of this capability and/or other stepwise traffic transitions is required.

3. Other Activities

3.1 In order to improve implementation of AMHS and facilitate exchange of information, Sint Maarten is hosting, in coordination with ICAO NACC and SAM Regional Offices, a NAM/CAR/SAM Air Traffic Services (ATS) Data Link Implementation Workshop. The workshop, originally scheduled for October 2015, will take place in Philipsburg, Sint Maarten, 18-21 April 2016.

3.2 The Task Force reviewed and updated the AMHS Regional Implementation Plan, as well as other matters in preparation for the ANI/WG/3 Meeting. The Task Force also reviewed the AMHS Terms of Reference (ToRs) Work Programs without comments or modification to the existing ToRs.

3.3 The list of active Task Force Members is below for review and update:

State	Point of Contact	Email
Cuba	Carmen de Armas	carmen.dearmas@iacc.aivanet.cu
	Carlos Jiménez Guerra	carlosm.jimenez@iacc.avianet.cu
Dominican Republic	Fernando Casso	fernando.casso@idac.gov.do
COCESNA	Mayda Avila	mayda.avila@cocesna.org
Trinidad and Tobago	Veronica Ramdath	vramdath@gmail.com
United States	Dulce M. Roses	dulce.roses@faa.gov

4. Suggested Action

4.1 The Meeting is invited to:

a) review the information presented in the working paper;

b) review and update the AMHS Implementation matrix shown in Attachment B;

c) review and update as necessary the list of active Task Force Members; and

d) take note and coordinate with Go Teams on actions identified under paragraph 2.3.

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Update: May 2015 — **CAR Region AMHS Implementation Matrix**

Administration	STATUS	System Description					System implementation milestones				(COM CHART) Connection with	POC	Remarks
		Location of Facility	AMHS Facility Type	AMHS Vendor	Current Facility Type	Current Vendor	AMHS System Procurement Date	AMHS System Implementation Date	AMHS Interoperability Test	AMHS Service Cutover			
Aruba	Under Study	Aruba									United States	Joselito Andrade	**5-2015** In the process of changing AFTN PAD. No projected date for AMHS
Bahamas		Nassau					1Q2011 mtg FAA Feb11	Jun 2011	Jun2011 begin testing		United States	Hillard Walker	Q2 2011: will engage an Isode Integrator to provide an AMHS solution **5-2015 No recent updates**
Cayman Islands	Establishment of Testing Circuit	Grand Cayman	MTA + UA	Frequentis	AFTN switch	Frequentis	end 1Q2011	4Q 2014	2Q2015	TBD	United States	Wayne DaCosta	**5-2015 System implemented but not operational. Interoperability testing in process**
Dominican Republic	Implemented	Santo Domingo	AMHS - MTA/UAs	Ubitech	AFTN Switch		already	Jan2011	May 2012	Sep 2012	United States	Fernando Casso	Originally implemented on MEVA II. Succesfully transitioned to MEVA III
Cuba	Interoperability Testing in process	La Habana	AMHS - MTA/UAs	ISODE/ In-house	AFTN Switch	Own system	N/A	TBD	2014Q4 - 2015Q2	-Sept 2015	United States	Carlos Jimenez y Layla Rodriguez, Carmen de Armas	**5 2015Parts of the Interoperability Testing was performed over a test circuit on MEVA II; Testing resumed once the test cicuit was migrated to MEVA III**
Haiti	Under Study	Port-au-Prince	TBD	TBD	AFTN User	DSA	10/15	03/16	05/16	09/16	United States	Emmanuel Jacques	**06/15 - Current vendor needs to be verify. Updated system implementation milestone.**
COCESNA	System Implemented-ready for testing	Tegucigalpa	AMHS Gateway	ISODE/ In-house	AFTN Switch	COCESNA	N/A	TBD	TBD	TBD	Belize - MTA	Mayda Avila Oscar Villela	**5-15 Testing with FAA on hold pending notification from COCESNA**
								TBD	TBD	TBD	Guatemala - MTA		
								1Q 2013	1Q 2013	1Q 2013	Managua - MTA		
								TBD	1Q 2013	TBD	Mexico - MTA		
								TBD	TBD	TBD	San Jose - MTA		
								1Q 2013	1Q 2013	1Q 2013	San Pedro Sula - MTA		
								TBD	TBD	TBD	San Salvador - MTA		
								1Q2011	Jun 2012	Sep 2012	United States		
Jamaica	System Implemented - ready for testing	Kingston	AMHS G/W	TBD	AFTN Switch	TBD	Q2-2012		Aug 2012	Oct 2012	United States	Gordon/Derrick Grant	5-15 No updates
Mexico	Coordination initiated	Mexico									Centro-America United States		5 2015 Initiated coordination with SENEAM
Curacao	Scheduled for testing	Curacao	AMHS MTA	Ubitech	AMHS System	Ubitech	May 2012	Jul 2012	Sept 2015	FeB 2016	Caracas- MTA	Jean Baptiste Getrouw	5-15 no updates
Trinidad and Tobago	Implemented- for testing	Port-of-Spain	AMHS ~~MTA~~/UAs/Gateway	Comsoft	AFTN Switch	Comsoft	Apr 2012	Sep 2012	Sep 12	Sep 12	Anguilla	Veronica Ramdath Randy Gomez	5-15 Interoperabiity testing in process 6-1-15 Testing to continue after MEVA III implementation. FAA to start coordination with T&T the week of 8 June 2015. End-to-end Testing will be coordinated in segment.
									Sep 12	Sep 12	Antigua		
									Sep 12	Sep 12	Barbados-UA		
									Oct 2012		Caracas- MTA		
									Sep 12	Sep 12	Dominica - UA		
									Sep 12	Sep 12	Fort-de-France- UA		
									Sep 12	Sep 12	Georgetown-UA		
									Sep 12	Sep 12	Grenada-UA		
									Sep 12	Sep 12	Montserrat-UA		
									Sep 12	Sep 12	Pointe-a-Pitre- MTA		
									Sep 12	Sep 12	Saint Kitts and Nevis-UA		
									Sep 12	Sep 12	Saint Lucia-UA		
	In Interoperability								Sep 12	Sep 12	Saint Vincent-UA		
									2015Q2	TBD	United States		
Turks and Caicos	Scheduled for testing	Providenciales	MTA	Stonefield Sys	AFTN Term	Stonefield Sys	1Q 2012	2Q 2012	Feb 2013	Mar 2013	United States	Emmanuel Rigby John T. Smith	**5 2015 No updates**
Sint Maarten	Coordination Initiated		AMHS MTA	IDS	AFTN Switch		2014Q1		2015Q3	TBD	United States	Lloyd Hinds	Project to resume after implementation of MEVA III
United States		Atlanta	AMHS G/W	U.S.A.	AFTN Switch	U.S.A.	now	now			Aruba Brazil Caracas Cayman Centro America Curazao Grand Turk La Habana Kingston Lima Mexico Nassau-S Panama Port-au-Prince Port-of-Spain Saint Maarten Santa Domingo Tortola	Dulce Roses	5-15 see notes