Fifth North American, Central American and Caribbean Working Group Meeting (NACC/WG/5)

Port of Spain, Trinidad and Tobago, 22-26 May 2017

Agenda Item 3   **Implementation on Air Navigation Matters**
          3.3   ANI/WG Progress on AIM, ATM and CNS

ANI/WG AMHS IMPLEMENTATION TASK FORCE PROGRESS REPORT

(Presented by the AMHS Rapporteur)

This Discussion Paper presents the results for the AMHS Task Force Coordination Meeting during the NACC/WG/5	
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency • Economic Development of Air Transport • Environmental Protection
References:	• Second NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/2), Mexico City, Mexico, 4 to 6 April 2016 • AMHS Task Force Teleconferences and email exchange

1.   Introduction

1.1   The AMHS Implementation Task Force met during the NACC/WG/5 Meeting held in Port of Spain, Trinidad and Tobago, 22-26 May. The purpose of this Task Force Meeting was to update accordingly the Matrix for Implementation of AMHS in the CAR Region.

1.2   Members from Trinidad Tobago, France, ECCAA, Dominican Republic, and FAA participated in the Meeting and updates from other Task Force Members were also received

2.   Discussion

2.1   The Task Force agreed that implementation of AMHS in the CAR Region should continue with the MEVA III Network using the approved NAM/CAR IPv4 addressing scheme. At this time, Cuba, St Maarten, COCESNA and Trinidad and Tobago completed their transition from AFTN to AMHS. Jamaica, Cayman Island and Panama initiated their required testing prior to implementation.

2.2   Trinidad and Tobago Delegate reminded the group that, as indicated in previous meetings, E/CAR does not use the already approved NAM/CAR IPv4 addressing scheme in their network. IPv4 addressing scheme is only used between Piarco, T&T and Atlanta, GA for the AMHS connection.

2.3　　　　　Task Force also revised the request to updated NAMCAR IP addressing scheme to include /30 IP for US-Jamaica; US-Panama; and US-Bermuda links. Based on this information the Task Force agreed on the proposed revision to the NAMCAR IP addressing scheme. In this regard ICAO NACC Office has updated the IPv4 addressing scheme (Version 2.XX).

2.4　　　　　The Terms of Reference (ToR) and Work Programmed were revised to update the existing Memberships and Tasks action items that were already completed.

2.5　　　　　The Task Force reviewed and updated the existing CAR Region Implementation Matrix with information provided by Members attending the Meeting and updates received via email messages. The Task Force urged the Member States to continue updating Matrix as accurate and soon as possible in order to better schedule testing and implementation. The updated version of the AMHS Regional Implementation Matrix is shown in the **Appendix** to this paper.

2.6　　　　　The Members also discussed the task of testing the transmission of XML data through AMHS system and agreed that this Task should be revised. Recommendation is to coordinate with States that have already implemented AMHS and are willing and able to initiate required procedures for testing XML over AMHS. Suggested coordination is initiated with Dominican Republic, Cuba, and United States.

2.7　　　　　The list of active Task Force Members depicted below was revised and updated accordingly:

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	Reybin Sanabria	Reybin.sanabria@cocesna.org
Trinidad and Tobago	Veronica Ramdath	vramdath@caa.gov.tt
United States	Dulce M. Rosés	dulce.roses@faa.gov
	Al O'Neill	al.oneill@faa.gov

3. **Suggested Action**

3.1 Based on the above mention information AMHS Task Force is recommending the following Conclusion

      a) Continue updating accordingly the CAR Region Implementation Matrix;

      b) and continue with completion of transition from AFTN to AMHS implementation; and

      c) initiate coordination of XML testing over AMHS

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APPENDIX A

ATS MESSAGE HANDLING SYSTEM (AMHS) IMPLEMENTATION TASK FORCE

Terms of Reference

1.   *Background*

During the first ANI/WG meeting, an AMHS Implementation Task Force was formed in order to streamline related air navigation implementation activities. This Task Force shall complete AMHS implementation in accordance with the Regional AMHS Implementation Plan as well as update and report progress to the ANI/WG based on the action plan for these tasks.

2.   *Responsibilities*

The Task Force is responsible for:

  a)   Work Programme Management
  b)   Coordination, implementation and trials of ATN ground applications/AMHS implementation (AMHS Regional Plan)
  c)   Revising and updating the IPv4 address plan and other CAR Region technical implementation issues in accordance with ICAO technical principles and guidelines

3.   *Working Methods*

The Task Force will:

  a)   Present its work programme containing activities in terms of objectives, responsibilities, deliverables and timelines
  b)   Avoid duplicating work within the ANI/WG and maintain close coordination among the existing entities to optimize use of available resources and experience
  c)   Designate, as necessary, Ad hoc Groups to work on specific topics and activities and organize clearly defined tasks and activities
  d)   Coordinate tasks to maximize efficiency and reduce costs via electronic means including emails, telephone and teleconference calls, and convene meetings as necessary
  e)   Report on and coordinate the progress of assigned tasks to the ANI/WG

4.   *Work Programme* - is included in Appendix B

5. *Membership*

Task Force Member - Name	State/T/IO	email
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APPENDIX B

ATS MESSAGE HANDLING SYSTEM (AMHS) IMPLEMENTATION TASK FORCE

WORK PROGRAMME

Task	Deliverables	Start Date	End Date	Responsible	Status	Remarks
Revision of CAR IPv4 Addressing Scheme	Study Results of Configuration of IP Backbone Network	27 Sept 2013	June 2018	Dominican Republic, United States, COCESNA	Valid	Stud pending review of current IPv4 address allocation
	Revised/updated IPv4 plan for CAR Region to remove redundancies	27 Sept 2013	Feb 2014	Dominican Republic (Fernando Casso)	Completed	Final version to be sent to ICAO: April 2014
Coordination, implementation and trials for ATN ground applications/AMHS implementation (AMHS Regional Plan)	Updates AMHS Regional Plan	Oct 2015	May 2017	United States	Completed	
	Assistance to AMHS implementing States	Feb 2014	Oct 2016	All	Completed	Go Teams were not needed anymore
	Recommendations for facilitating implementation of AMHS	Jan 2014	Oct 2014	Dominican Republic, United States, COCESNA	Completed	
CAR Router Plan	Revised router plan based on requirements from Member States	18 Nov 2013	April 2018	Dominican Republic, United States, COCESNA	Valid	United States, Dominican Republic and COCESNA, will continue reviewing plan
AMHS Transition Plan	Revised and updated ATN Transition Plan	18 Nov 2013	Sept 2017	Cuba, Dominican Republic, United States, COCESNA	Valid	
Training	Periodically identify AMHS training matters as needed	27 Sept 2013	June 2018	All	On-going	

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NAM/CAR IP Addressing Scheme

No.	Subnet/Subred	Admin & local host / Admin y Receptor local	Via	Links/Enlace	IPv4 Address / Dirección IPv4
59	10.31.224.232/30	Jamaica	MEVA	Network Address / Dirección de Red	10.31.224.232/30
				Jamaica (Kingston)	10.31.224.233/30
				United States / Estados Unidos (Atlanta)	10.31.224.234/30
				Broadcast Address / Dirección de Multidifusión	10.31.224.235/30
60	10.31.224.236/30	Panama MEVA	MEVA/REDDIG	Network Address / Dirección de Red	10.31.224.236/30
				Panama	10.31.224.237/30
				United States / Estados Unidos (Atlanta)	10.31.224.238/30
				Broadcast Address / Dirección de Multidifusión	10.31.224.239/30
61	10.31.224.240/30	Bermuda	U.S.A. domestic network	Network Address / Dirección de Red	10.31.224.240/30
				Bermuda	10.31.224.241/30
				United States / Estados Unidos (Atlanta)	10.31.224.242/30
				Broadcast Address / Dirección de Multidifusión	10.31.224.243/30

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CAR Region AMHS Implementation Matrix

		System Description					System implementation milestones				(COM CHART) Connection with	POC	Remarks
Administration	STATUS	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	Establishment of Testing Circuit	Aruba		Thales							United States	Joselito Andrade	5-2015 In the process of changing AFTN PAD. No projected date for AMHS 12-2016 Csigned Technical Letter 3-2017 System-System test
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 5-2015 No recent updates
Cayman Islands	In Interoperability Testing	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 4-16 Testing has been suspended until further notificatin from Cayman 3-2017 Initiated testing again
Dominican Republic	Implemented	Santo Domingo	AMHS - MTA/UAs	Ubitech	AFTN Switch		already	Jan2011	May 2012	Oct 2013	United States	Fernando Casso	Originally implemented on MEVA II. Succesfully transitioned to MEVA III
Cuba	Implemented	La Habana	AMHS - MTA/UAs	ISODE/ In-house	AFTN Switch	Own system	N/A	TBD	2014Q4 - 2015Q2	Mar 2017	United States	Carlos Jimenez y Layla Rodriguez, Carmen de Armas	3-201 7Parts of the Interoperability Testing performed on MEVA II; testing resumed under MEVA III and completed transition Mar 2017.
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 3-2017 - COCESNA/US implementation completed
								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	Mar 2017	United States		
Jamaica	Establishment of Testing Circuit	Kingston	AMHS G/W	TBD	AFTN Switch	TBD	Q2-2012		Aug 2012	Oct 2012	United States	Derrick Grant	5-15 No updates 4-16 Updating ATN system, Completion projected for end of 2017. 3-2017 Established testing circuit
Mexico	Coordination initiated	Mexico									Centro-America United States		5 2015 Initiated coordination with SENEAM 4-16 No updates provided at this time.

Update: March 2017	CAR Region AMHS Implementation Matrix												
		System Description					System implementation milestones				(COM CHART) Connection with	POC	Remarks
Administration	STATUS	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			
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	Sep 12 / Sep 12	Anguilla / Antigua	Veronica Ramdath Randy Gomez	5-15 Interoperabiity testing in 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. 4-16 Interoperability testing in progress. 80% completed
								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		
								Sep 12	Sep 12	Saint Vincent-UA		
	In Interoperability							2015Q2	Jan 2017	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	In Interoperability Testing		AMHS MTA	IDS	AFTN Switch		2014Q1		2015Q3	Mar 2017	United States	Lloyd Hinds	Completed Mar 2017
United States		Atlanta	AMHS G/W	U.S.A.	AFTN Switch	U.S.A.	now	now			Aruba	Dulce Roses	5-15 see notes
											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		

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