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**Fourth NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/4)**  
Miami, United States, 21 – 24 August 2018

**Agenda Item 4: Follow-up, Performance Evaluation and Monitoring of the CAR Regional Performance Based Air Navigation Implementation Plan**

**PROGRESS WITH AMHS TRANSITION AND LEGACY X.25 AFTN SUPPORT**

(Presented by United States)

<b>EXECUTIVE SUMMARY</b>	
This working paper presents the progress of FAA transition to AMHS and support for remaining legacy X.25 AFTN connections after decommissioning of its X.25 network.	
<b>Action:</b>	Suggested actions are listed in Section 4.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"><li>• Safety</li><li>• Air Navigation Capacity and Efficiency</li><li>• Security &amp; Facilitation</li><li>• Economic Development of Air Transport</li><li>• Environmental Protection</li></ul>
<i>References:</i>	<ul style="list-style-type: none"><li>• Eighth Central Caribbean Working Group Meeting (C/CAR/WG/8), Miami, United States May 2010.</li><li>• Thirty first MEVA Technical Management Group Meeting (MEVA/TMG/31), Kingston, Jamaica 24-26 May 2016</li><li>• Thirty second MEVA Technical Management Group Meeting (MEVA/TMG/33), Willemstad, Curacao, 29-31 May 2017</li></ul>

**1. Introduction**

1.1 At the Eighth Central Caribbean Working Group Meeting (C/CAR/WG/8) held in Miami, United States in May 2010, the FAA announced plans for decommissioning its X.25 network and concentrating all international X.25 connections at its Atlanta and Salt Lake Network Enterprise Management Center (NEMC) locations.

1.2 The current X.25 network is beyond the End of Life and has no active vendor maintenance. The network will be terminated in 2018. Similarly, the FAA's AFTN message switch will not support X.25 interfaces beyond 2018 so that essential server upgrades can be performed.

1.3 Since 2010, the FAA has managed to reduce the number of X.25 network nodes and has reduced the number of connected X.25 users from approximately 500 to less than 10. There are just two operational nodes remaining at Atlanta and Salt Lake City. The remaining users are all international X.25 AFTN with the majority being MEVA members.

1.4 The table below shows the current FAA AMHS transition status. For MEVA users the status is: 8 operational AMHS and 6 remaining on AFTN/X.25.

OPERATIONAL (AMHS)		TESTING (AMHS)		REMAINING (X.25)	
Aruba*	(MEVA)	Australia	(Landline)	Bahamas <sup>2</sup>	(MEVA)
Canada*	(Landline)	Mexico	(Landline)	Brazil	(MEVA)
Cayman Is.*	(MEVA)			Curacao <sup>2</sup>	(MEVA)
COCESNA	(MEVA)			Haiti <sup>2</sup>	(MEVA)
Cuba	(MEVA)			Peru	(MEVA)
Dominican Rep.	(MEVA)			Venezuela	(MEVA)
Fiji	(Landline)				
Jamaica*	(MEVA)				
Japan	(Landline)				
New Zealand	(Landline)				
Panama*	(MEVA)				
Portugal*	(Landline)				
Sint Maarten <sup>1</sup>	(MEVA)				
Trinidad	(Landline)				
U.K. NATS	(Landline)				

\* Country transitioned to AMHS since MEVA TMG 32, 2017.

1. Sint Maarten transitioned to AMHS but not operational since Hurricane Irma.
2. Makes and receives X.25 calls (the operation will change in future)

1.5 This paper presents the progress toward the elimination of the existing FAA X.25 network and ongoing support for any legacy X.25 connections.

## 2. Discussion

2.1 ICAO has encouraged existing X.25 AFTN users to migrate to Air Traffic Services Message Handling System (AMHS) and the NACC region is implementing an IP-based approach. The FAA has actively supported this approach and has refined a testing and transition process in conjunction with participating ANSPs.

2.2 The FAA's AMHS testing capacity is limited. Users planning an AMHS transition should contact Ms. Dulce M. Rosés (dulce.roses@faa.gov) and/or Mr. Al O'Neill (Al.O'Neill@faa.gov) in order that their preferred timeframe can be scheduled.

2.3 Several MEVA III users will need X.25 AFTN support after the decommissioning of the FAA's network this year and before their migration to AMHS. A temporary COTS TCP/IP to X.25 conversion solution (using CISCO equipment) has been deployed allowing a local TCP/IP connection, originated from their AFTN switch, to be converted into an outgoing X.25 Switched Virtual Circuit (SVC) connection. The remaining X.25 users, above, will be migrated to this solution.

2.4 Since the AFTN switch has geographic redundancy between Atlanta and Salt Lake City, either center may initiate the TCP/IP session. The result is that X.25 SVCs must be initiated by the FAA and received by legacy X.25 users. This may be a reversal of today's operation or a change if two-way initiation is used. Recent implementations of X.25 PADs by the MEVA III vendor (for Brazil, Peru and Venezuela) are already configured to receive X.25 SVCs only.

### **3. Conclusion**

3.1 In order to complete decommissioning of its X.25 network, legacy X.25 AFTN users will be migrated to a TCP/IP to X.25 conversion capability during 2018. The result will be the users may have to change their X.25 configuration to receive X.25 SVC connections from the legacy support system.

### **4. Suggested Actions**

4.1 The Meeting is invited to:

- a) Take note of the information in this paper; and
- b) Take appropriate action as needed