



## INTERNATIONAL CIVIL AVIATION ORGANIZATION

### ICAO NACC REGIONAL OFFICE

#### ICAO/FAA Workshop/Meeting on the Follow-up to the Implementation of the ATS Message Handling System (AMHS) in the NAM/CAR Regions

(Miami, Florida, United States, 10 to 12 April 2012)

#### SUMMARY OF DISCUSSIONS

##### 1. Introduction

1.1 The workshop/meeting was hosted by the United States/FAA in coordination with ICAO. The objectives of the workshop were:

- a) provide participants with a forum to exchange information, experiences and lessons learned from the different AMHS preparatory actions made in the NAM/CAR Regions;
- b) provide guidance on the AMHS implementation within the global operational concept framework of the ICAO and the regional agreements;
- c) discuss and organize the AMHS fore coming trial and implementation activities in the NAM/CAR Regions based on the implementation matrix agreed in the AMHS workshop of 2010; and
- d) provide knowledge on the current and future status of the AMHS implementation in the NAM/CAR regions.

1.2 The event followed-up on the previous agreements for AMHS implementation accomplished in the FAA Workshop on the Implementation of the ATS Message Handling System (AMHS) in the NAM/CAR Regions held in Miami, Florida, United States, 19 to 21 October 2010, The NAM/CAR Regional Performance Based AirNavigation Implementation Plan (NAM/CAR RPBANIP) Regional Performance Objectives No. 9 *Optimization and Modernization of Communication Infrastructure*, applying ICAO SARPs and guidance material aswell as the CAR/SAM Regional Strategy for ATN implementation and Applications and other ICAO reference material. The final event programme and presentations/documentation are available at: <http://www.mexico.icao.int/Meetings/AMHS2012.html>

1.3 The workshop/meeting was attended by a total of 20 participants from 9 States and 1 international organization representatives. The list of participants is available at **Appendix A** to this document.

1.4 Ms. Dulce M. Rosés on behalf of Mrs. Lucy Holemans, FAA Manager welcomed the participants and opened the event. Mr. Julio Siu, Regional Officer CNS of the ICAO NACC Regional Office in behalf of Mrs. Loretta Martin, Regional Director of the ICAO NACC Regional Office, also welcomed the participants, highlighting the benefits of AMHS implementation and its role in the development of the Aeronautical Telecommunication Network for achieving the Global ATM operational concept. Ms. Dulce M. Rosés and Mr. Julio C. Siu carried out the coordination and facilitation of the event. An AMC presentation was provided by the AMC Project coordinator.

## 2. Discussions

2.1 The first day started with ICAO providing guidance and SARPs for AMHS implementation within the global operational concept framework, ASBU methodology and regional agreements; the current and future status of the AMHS implementation issues in the NAM/CAR Regions and the pending planning/implementation issues for States to review.

2.2 United States presented lessons learned on recent AMHS Implementation with the United Kingdom, Japan and Fiji describing the FAA AMHS cutovers, current FAA AMHS status, interoperability test, cutover planning and procedures and dual feed of data configuration. Another presentation described the key issues to be taken into consideration for an operational AMHS network. United States participation and Asia Pacific AMHS implementation planning were also presented. United States also described the NAM/CAR/SAM IPv4 Addressing application, the possible monitoring features with BGP and SNMP and their planning for X.25 circuit migration to an IP infrastructure. Finally a live explanation for the ATS Messaging Management Centre (AMC) was given to promote the participants registration and use of the AMC.

2.3 The Second day, States (Antigua, Aruba, Cuba, Curacao, Dominican Republic, Jamaica, Trinidad and Tobago and Turks and Caicos Islands) and COCESNA provided their current AMHS implementation status as shown on the AMHS implementation matrix. United States briefed on their activities for optimization and consolidation of their data switching systems in Salt Lake City and Atlanta. United States presented and explained the suggested transition plan to follow by States who are to test with United States, highlighting lessons learned from recent AMHS implementations. United States also provided information on cut over and test procedures, interface configuration control document and other test related document.

2.4 A revision of the relevant planning issues, testing activities and dates was carried out the last day, identifying the main activities needed to support AMHS implementation. These activities will be carried out via teleconferences and meetings.

## 3. Conclusions/Recommendations

3.1 As a result of the discussion, the Meeting developed the following conclusions/recommendations to be addressed by NAM/CAR Region States/Territories/International Organizations and ICAO, as appropriate:

### General Issues:

3.2 In support of States implementation and testing of the AMHS Systems, United States will provide several documents which will be posted on ICAO Webpage for common reference such as: Parameters exchange document, Interface Configuration control Document, cutover procedures, and FAA sample testing procedures. **Due date: April 18, 2012.**

3.3 Due to the implementation of the New Flight plan format, several States have sped up the implementation of their AMHS Systems; the modernization of regional telecommunication networks are facilitating the implementation of ATN applications and the recognition of the operation benefits achieved through the implementation of CPL-LAM functionalities, several States plan to implement AIDC shortly. In this regard the Meeting agreed that several updates were to be included in the CAR/SAM ANP Plan for the implementation of ground-ground applications (Table CNS 1Bb) as attached in **Appendix B**. GREPECAS D Project will revise this proposal for ICAO **May 2012** scheduled Amendment Process.

3.4 The Meeting recognized that the current ATN router Architecture for the CAR Region needs to be revised, Table CNS 1 Ba refers (**Appendix C**). GREPECAS D Project will review this information for ICAO in the **May 2012** scheduled Amendment Process, while the AMHS testing and implementation schedule will continue based on the current COM Chart in the Region.

3.5 Considering the active status on the planned tests and implementation of the AMHS System, the Meeting identified the need to have a common webpage where information relevant to these activities is available. In this regard, it was suggested that ICAO NACC Regional Office implemented a common webpage by **18 May, 2012** containing as a minimum:

- AMHS implementation PoCs
- AMHS implementation Planning
- AMHS relevant testing, training and implementation documents
- AMC relevant guidance
- Relevant links to related sites

3.6 The Meeting recognized the need for all NAM/CAR States that have not done so, and particularly the ones conducting testing and even other States planning AMHS, to be registered at the AMC. In this regard it was agreed all States PoC conducting AMHS tests shall be registered to the AMC by **27 April 2012**. It was mentioned that computer-based training on the use of AMC is available at: [https://trainingzone.eurocontrol.int/clix/data/scorm/decompressed/GEN\\_AMC\\_1253704/AMCMenu.htm](https://trainingzone.eurocontrol.int/clix/data/scorm/decompressed/GEN_AMC_1253704/AMCMenu.htm) as well as a video at: <https://trainingzone.eurocontrol.int/amc.htm>. ICAO provided an AMC presentation for the participants' understanding of the AMC and its operational activities. Also, the Meeting took note of the current AMC training guidance, which explains in detail the roles, competencies and necessary training to be given to the AMHS operating and maintenance staff.

**Testing coordination/Implementation follow-up and Update**

3.7 When reviewing the Regional ATN implementation Strategy, ICAO recalled that 2015 is the target date for AMHS implementation by States, with the following follow-up to the short term activities:

Actions	Implementation Status
Complete the updating of the aeronautical digital communication networks by providing intra and inter-regional interconnection and interoperability.	Complete
Implementation of the AMHS to replace the AFTN.	Ongoing with delays
Carry out the strategic deployment of a limited number of ATN routers of the ATN backbone to support other ground-ground and air-ground applications.	Ongoing with network improvements
The referred ATN routers must provide AFTN/AMHS gateway during the transition phase.	Complete
Beginning of implementation of the AIDC within control centers.	Ongoing with delays
Undertake the training of operational and technical personnel in order to provide the necessary knowledge to introduce the ATN and its ground-ground applications (AMHS and AIDC).	Ongoing with delays

Actions	Implementation Status
Based on the relevant deployment of the ATN ground-to-ground infrastructures and ground applications, gradual introduction of ATN air-ground applications is suggested.	Delayed
Implementation will be in full agreement with SARPs, ICAO PANS and GREPECAS guide.	Understood

3.8 Several testing issues were highlighted:

- a) A training Lab/Test bed or system is preferable
- b) Due to the fact that current operation of the AMHS systems will coexist with many AFTN users, it was recommended to have the AMHS Basic Service implemented initially.
- c) AMC registration and data completion if required prior to conducting the tests.
- d) The tests between United States and other States should consider on-site system tests as a priority other than factory test given by system manufacturers
- e) Use of regional agreed IPv4 addressing scheme.
- f) Confirm the CAAS/FX addressing scheme as detailed in the AMC.

3.9 United States highlighted the following issues for the AMHS transition:

- States that are ready to transition to AMHS should plan well in advance and begin coordination with the Federal Aviation Administration
- Select a Point of Contact through the transition process,
- That States share information among themselves regarding AMHS implementation.

3.10 The AMHS implementation matrix was updated as attached in **Appendix D**. Complementary to the matrix as detailed action plans (**Appendix E**) based on FAA Transition Process (**Appendix F**) were initially agreed under a three-year planning. 4 States/International Organizations will be conducting testing and AMHS service cutover in 2012.

3.11 Regarding the communication means for the testing, United States indicated 2 options:

- Option One: Testing over the Internet
- Option Two: Testing over MEVA II Network

On a case by case basis, States should determine the length of time to keep AFTN and AMHS in dual feed or backup.

3.12 States/Territories/International Organizations should follow-up the conclusions/recommendations resulted from this Follow-up implementation AMHS meeting, under the work programme of the corresponding NAM/CAR Working Groups and conclusions/recommendations will also be reported to the GREPECAS. In this regard, the Meeting agreed for ICAO to contact the States that were not in attendance such as Bahamas, Cayman Islands, Haiti, Mexico and other concerning their plans for AMHS implementation and particularly the testing and cutover dates.

3.13 Curacao and Trinidad and Tobago indicated their interest to have testing on AMHS implementation with Venezuela by **October 2012**. The ICAO NACC Regional Office will coordinate with the ICAO SAM Regional Office concerning the SAM boundary States and their response to the proposed testing dates, indicating the necessary PoCs for Venezuela.

3.14 The Meeting agreed that the following aspects for AMHS implementation should be addressed during the next meeting in support of the implementation:

- a) Each State to ensure commitment to comply with actions and dates as agreed in the Plan and the active role of PoC in this coordination.
- b) Each State to address training individually due to the diversity of AMHS systems.
- c) Based on the initial parameter exchange document, participants to define the need for a technical meeting in FAA Tech Center to support implementation, to be discussed in next teleconference of **April 18**.

3.15 Teleconferences will be carried out bilaterally between United States and States conducting tests based on the action planned indicated in paragraph 3.10. An initial teleconference to confirm the dates will be carried out among all States in **April 18 at 17UTC**, coordinated by FAA and ICAO PoC.

**Other issues:**

3.16 Next Meeting will be determined soon after the first States transition to AMHS, tentatively after May 2013, venue to be defined. This will be an opportunity for such State to share information with other States on lessons learned during testing transition and final implementation of AMHS.