

# INTERNATIONAL CIVIL AVIATION ORGANIZATION



## Second AFI Regional Workshop on AMHS

(Dakar, Senegal, 28–29 May 2013)

## Draft Final Report

Prepared by ICAO Secretariat

May 2013

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## 1. Introduction

The Second Regional Workshop on the AFI ATS Message Handling System (AFI/AMS/WS/2) took place at the Ecole Regionale de la Navigation Aerienne et du Management, Dakar, Senegal from, 28 to 29 May 2013.

## 2. Objectives

The main objective of the workshop was to provide an overview of the AMHS concept, system level provisions, detailed technical specifications and AFTN/AMHS gateway specifications, based on the provisions contained in ICAO Annex 10, Aeronautical Telecommunications, Volume III, Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols (Doc 9880), and Manual on the Aeronautical Telecommunication Network (ATN) using Internet Protocol Suite (IPS) Standards and Protocols (Doc 9896).

## 3. Attendance

The meeting was attended by 51 participants from twelve (18) Contracting States, One international organization, namely AFCAC, Six (06) Air Navigation Service Providers (ASECNA (acting behalf AFI 17 Contracting States), ATNS, NAMA (Nigeria), Roberts FIR Guinea, Liberia, (Sierra Leone), GCAA (Ghana), ENANA (Angola)) and two (02) AMHS facilities manufacturers, namely INDRA/Avitech and Comsoft. A list of participants is provided at **Appendix A**.

## 4. Officers and Secretariat

**Mr. Francois-Xavier SALAMBANGA**, Regional Officer, Communications, Navigation and Surveillance (CNS) from the ICAO Regional Office for Western and Central Africa (Dakar), acted as Secretary of the AFI AMHS Implementation Workshop,

## 5. Working language

The meeting was conducted in English and the meeting documentation was issued in this language.

## 6. Opening

The meeting was opened by **Mr. Mam Sait JALLOW**, Regional Director WACAF, Dakar, assisted by Mr **Eugenio NSUE** Director of ERNAM, ASECNA

## 7. Agenda

The meeting adopted the following agenda:

### 1. Introduction

- 1.1 Overview
- 1.2 End systems providing the ATSMHS
- 1.3 Terminology

### 2. System Level Provisions

- 2.1 ATSMHS users
- 2.2 AMHS model
- 2.3 Organization of the AMHS
- 2.4 AMHS management domain configurations
- 2.5 Naming and addressing principles
- 2.6 AMHS routing and re-routing
- 2.7 AMHS traffic logging upon origination

**3. ATSMHS Specifications**

- 3.1 ATS message user agent specification
- 3.2 ATS message server specification
- 3.3 Parameters
- 3.4 Subsetting rules

**4. AFTN/AMHS Gateway Specifications**

- 4.1 General
- 4.2 AFTN/AMHS gateway components
- 4.3 General functions
- 4.4 AFTN to AMHS conversion
- 4.5 AMHS to AFTN conversion

**5. AMHS Implementation in the AFI Region**

**6. Any other business**

## 8. Recommendations

The meeting was provided with presentations from the secretariat, from ATNS, ASECNA, Ethiopia, Roberts FIR and Zimbabwe.

The industry provided the meeting with the ongoing evolving technology governing AMHS, demonstration and trials. After technical discussion the 2nd Workshop on the implementation of AMHS in the AFI region agreed on the following recommendations to the attention of the AFI AMHS Implementation Task Force scheduled to take place back to back with the Workshop.

Number	Title
<b>Agenda Item 1</b>	<b>Introduction: Overview- End systems providing the AMHS- Terminology</b>
<b>Recommendation 2/01</b>	<p><b>Reinforcement of AFI Ground-Ground Communication medium capability to support the implementation of AMHS</b></p> <p>That, considering the critical role of the satellite VSAT based networks to support ATN components in particular AMHS within AFI, Administration/Organizations reinforce the capability of current Networks (AFISNET, CAFSAT, NAFISAT, and SADC/2) to comply with the requirements of AMHS in accordance with the specifications provided by ICAO relevant Documents (Annex 10)</p>
<b>Agenda Item 2</b>	<b>System Level Provisions</b>
<b>Recommendation 2/02</b>	<p><b>Bilateral and Multilateral Agreements</b></p> <p>That in accordance with the provision of AFI AMHS strategy, bilateral and multilateral agreements be concluded with the aim to ensuring compliance and full AMHS systems interoperability within AFI Region.</p>
<b>Agenda Item 3</b>	<b>AMHS Specifications</b>
<b>Recommendation 2/03</b>	<p><b>Need of Network infrastructures tests</b></p> <p>That, in accordance with interoperability requirements for the implementation of AMHS, AFI/AMHS/I/TF encourage States to conduct tests on the network infrastructure designed to support AMHS in the AFI Region.</p>
<b>Recommendation 2/04</b>	<p><b>Interoperability of AMHS in the AFI Region</b></p> <p>That, in accordance with interoperability requirements for the implementation of AMHS, AFI/AMHS/I/TF finalize AMHS guidance materials taking into consideration the existing AMHS systems.</p>
<b>Recommendation 2/05</b>	<p><b>Interregional connectivity and interoperability of AMHS systems</b></p> <p>That, AFI/AMHS/I/TF develop proposals to ensure interregional connectivity/interoperability between AMHS systems in the time frame of the AFI AMHS implementation Plan.</p>
<b>Recommendation 2/06</b>	<p><b>Survey of the status of implementation AMHS in AFI neighboring regions</b></p> <p>That, a survey of the status of implementation of AMHS in the AFI neighboring regions be updated in order to align the implementation of cost effective AFTN AMHS Gateway capability aiming to ensure seamless Aeronautical Fixed Service during the AMHS transition period.</p>
<b>Recommendation 2/07</b>	<p><b>National and Regional Security Policy and Regulation</b></p> <p>That, the AFI/AMHS/I/TF develop with the support of ICAO, guidelines for national and regional security policy and regulation for AMHS systems and applications. (Time line TBD by the TF)</p>
<b>Agenda Item 4</b>	<b>AFTN/AMHS Gateway Specifications</b>
<b>Agenda Item 5</b>	<b>AMHS Implementation in the AFI Region</b>
<b>Recommendation 2/08</b>	<p><b>Update of the Strategy for the Implementation of AMHS in the AFI Region</b></p> <p>That, following Conclusion 18/19 (AFI AMHS strategy) :</p> <ol style="list-style-type: none"> <li>AFI AMHS strategy be reviewed taking into consideration, the experience gained by the States/Organizations who have already implemented AMHS systems;</li> <li>The relevant documents be finalized to enable an efficient and coordinated implementation of AMHS in the Region.</li> </ol>

Number	Title
<b>Recommendation 2/09</b>	<b>Need of training on AMHS for AFI operational and technical personnel</b> That , a) States/Organizations are encouraged to: <ul style="list-style-type: none"><li>▪ Expedite the development and the implementation of consolidated training plans and programmes for operational and technical personnel;</li><li>▪ Take training opportunity and capability offered by current training centers within the Region to reinforce the capacity of their operational and technical personnel</li></ul> b) ICAO pursue its efforts in supporting the AFI States through training, Regional Workshops and seminars on AMHS systems.