



**INTERNATIONAL CIVIL AVIATION ORGANIZATION**  
**AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP**  
**TWENTENTH MEETING (APIRG/20)**  
**(Yamoussoukro, Cote d'Ivoire, 30 November - 2 December 2015)**

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**Item 2 : Performance framework for planning and implementation at the regional level**

**2.4 : Communications, Navigation and Surveillance (CNS)**

**IMPLEMENTATION OF AMHS**

*(Presented by ASECNA)*

| <b>SUMMARY</b>  |  |
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| This working paper gives an update of the implementation of the ATS messaging system (AMHS) at the level of the region, including in ASECNA area and highlights the need for coordination between centres equipped with AMHS in the AFI region as part of a regional operational implementation.  |  |
| <b>REFERENCES:</b>  |  |
| <ul style="list-style-type: none"><li>▪ ICAO Letter AN 7/49.1-09/34 issued on April 14, 2009 concerning the registration of AMHS centres to CMA</li><li>▪ SAT 15 - Conclusion SAT/15/12: implementation and interconnection of AMHS systems</li><li>▪ APIRG 17 - Conclusion 17/16: implementation of AMHS</li><li>▪ APIRG 18 - Conclusion 18/19: strategy for implementation of AMHS</li><li>▪ APIRG 19 - Decision 19/26: draft guidelines for the implementation of AMHS systems in AFI region</li></ul> |  |
| <i>Strategic objectives</i>   | This working paper focuses on the strategic objectives <b>A, B and E</b> . |

**1. INTRODUCTION**

1.2 The implementation of the AMHS is currently underway in the AFI region and must be conducted in accordance with the Global Air Navigation Plan (GANP), the Aviation System Block Upgrade (ASBU) and the AFI regional strategy of implementation of the AMHS.

1.3 In this context, ASECNA has undertaken a major project of implementation of AMHS/AFTN switches in ten (10) of its operational centres pending the extension to all the other centres in the framework of its 2014-2017 equipment and services plan.

1.4 However, at a regional level, some issues should be taken into account without delay, to take full operational advantage in implementing the AMHS in the AFI region.

## **2. DISCUSSION**

2.1. In accordance with conclusion 18/19, the AFI regional AMHS implementation strategy and AFI air navigation plan, ASECNA is proceeding to the progressive implementation of the AMHS in the different operational centres. Thus, in the first phase, main centers such as Dakar, Brazzaville, Niamey, as well as Antananarivo, Bamako, Cotonou, Lomé, N'Djamena, Nouakchott and Ouagadougou, and EAMAC are currently being installed with switches with AMHS capability. At that time, the installation of the system is completed for Dakar, Bamako, Lome and Cotonou centres.

2.2. These centres will be operational by earlier 2016 and the extension to other centres is planned in the 2014-2017 equipment and services plan at the end of which all ASECNA centres will have AMHS capability.

2.3. At the level of the AFI region, other COM centres are equipped with AMHS capacity or are underway but so far the AMHS features are operated only at the local or even national level. As a first ground-to-ground ATN application, it is necessary to upgrade the aeronautical telecommunications infrastructure to allow the operational implementation of the AMHS, based on the TCP/IP Protocol (Protocol for communication between these message servers (MTA) and between MTA and the other end AMHS systems.

2.4. In the context of the operational implementation of the AMHS, the following questions must be addressed as soon as possible. These include :

- coordination of the AMHS addresses, including the registration of the AFI centers at the AMC
- AMHS training, including basic training, technical training and operational training;
- tests of AMHS conformity and interoperability
- pre-operational testing
- operational shifting

2.5. The audit of the AFISNET, whose results were adopted by the top Management of AFISNET network Committee in October, as well as the improvement of aeronautical NAFISAT, SADC-2 and current CAFSAT VSAT networks, will provide network capabilities, protocols and infrastructure necessary for the implementation of the AMHS.

2.6. However, cooperation between the various operational centres with AMHS capabilities as well as different aeronautical VSAT networks operators, is necessary for a smooth implementation of the AMHS at the level of the AFI region in accordance with the schedule of the block zero of Aviation System Block Upgrade (ASBU).

### 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) take note of the information contained in this working paper.
- b) encourage ASECNA and other navigation service providers to carry on the gradual implementation of AMHS for a harmonized transition from AFTN to AMHS in the AFI region;  
and
- c) define a plan for a harmonized and coordinated operational implementation of the AMHS in the AFI regional level by late 2018, including:
  - implementation of VSAT networks capabilities together with associated addressing plans and safety policy;
  - coordination of addresses and interoperability and switch-over tests; and
  - enhancing operational and technical trainings.

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