

**INTERNATIONAL CIVIL AVIATION ORGANIZATION****Western and Central Africa Office****First Meeting of the Central Atlantic FIRs Satellite (CAFSAT) Network Management Committee (CNMC/1)
(Recife, Brazil 2 May 2011)**

Agenda Item 5: CAFSAT Modernization and Re-engineering**(Presented by the secretariat)**

SUMMARY
The purpose of this paper is to review the status of the current developing or planned projects by CAFSAT States/organization to conduct the modernization of the Network and develop if necessary a roadmap for an harmonized modernization and re-engineering exercise
Action by the meeting is at paragraph 3.
References : Terms of Reference of CNMC <i>Note: References can be downloaded from www.icao.int/wacaf.</i>
Related ICAO Strategic Objectives A & C.

1. Introduction

CAFSAT Network is one of the eldest satellite based Network designed for Air Navigation Service provision within SAT States. The nodes of this network are at least ten (10) years old with the latest stations implemented on 2001.

In the framework of CNMC mandate it should be possible to undertake common harmonized actions aiming to ensuring a soft modernization and re-engineering exercise in order to guarantee the Quality of the current Services and prepare the integration of new CNS/ATM applications in the Network

2. Discussion

CAFSAT Network was designed and its facilities purchased and installed in the framework of a close collaborative exercise between CAFSAT States members.

The Network has been operating since 2001 over three continents (EUR, SAM, and AFI) and its modernization or re-engineering requires an harmonized approach that should involve all the stakeholders in order to ensure seamless provision of Aeronautical fixed service (AFTN, ATS/DS) supported by the Network along the EUR/SAM corridor while interfacing with AFI for a safer Air navigation service provision.

Moreover, the forthcoming implementation of CNS/ATM components with time critical or sensitive applications (Automation of ATM in the frame of ICAO New Flight Plan Format, Sharing Surveillance data, Implementation of AMHS...) may require the modernization/re-engineering of the current VSAT Networks taking into consideration the flexibility gained with the emerging technologies and bearing in mind the necessity to ensure a comprehensive safety of the data across the Networks and a costs effectiveness of the operation for the VSAT managers .

CAFSAT nodes have been updated from, time to time and mainly during the migration process in 2008 when some base band components where replaced.

Furthermore reports are made from time to time by some CAFSAT States on their ongoing re-engineering project.

In order to harmonize the re-engineering exercise in the framework of CNM Terms of Reference it should be advisable to develop a roadmap of the Network modernization and re-engineering taking into consideration the current requirement of the existing operational application and the future requirement of the new applications.

This roadmap, based on ICAO guidelines for the provision of VSAT network should lead to the development of Terms of Reference of CAFSAT Network modernization and re-engineering exercise comprising the clear definition of the operational requirements with a service level performance assessment process, maintenance personnel training, turn over requirement and cost effectiveness.

3. Action by the meeting:

The meeting is invited to:

- a) Take note of the above information
- b) Share the current individual ongoing project in the matter of CAFSAT nodes modernization and;
- c) Develop a roadmap for the Network modernization and re-engineering taking into consideration the current requirement of the existing operational application and the future requirement of the new applications.