



INTERNATIONAL CIVIL AVIATION ORGANIZATION
THIRD MEETING OF APIRG COMMUNICATION NAVIGATION AND
SURVEILLANCE SUB GROUP (CNS/SG/3)

(Nairobi, 26-30 April 2010)

Agenda item 4: Aeronautical Fixed Service

Update CAFSAT

(Presented by the Secretariat)

SUMMARY

The present IP informs the meeting on the evolution of the CAFSAT network and its impact on the Aeronautical Fixed Service in the concerned areas.

REFER: Reports SAT14, SAT14/TF1Meetings
 Report APIRG 16
 Report RAN/AFI SP
 DOC. 7474 (Rec LIM/AFI; RAN/AFI7;
 RAN/AFI/6)

The information contained in this IP is essentially provided by the WACAFs CAFSAT nodes sites.

1. Introduction

1.1 The CAFSAT Network is a trans-regional network which implies the AFI, EUR and SAM areas. Since its implementation, it has been solving the gaps previously noted in the Aeronautical Fixed Service (ATS/DS, AFTN) and remains an available support for the implementation of CNS/ATM systems and in particular of the ground components of the ATN (AMHS, Surveillance data Exchange...).

1.2 As all the networks, it has been continuing its growth and being submitted to adjustments dictated by the technological evolution.

2. Discussion

2.1 Evolution of CAFSAT network

2.1.1 Since last CNS/SG/2 meeting, the CAFSAT Network knew notable evolutions as regards to interconnection between networks and its modernization as well.

2.2 Evolution and modernisation

2.2.1 SAT 14 meeting (Montevideo, Uruguay, 7- 9 May, 2008) was informed of the end-of-life of the original satellite **IS-801** on which CAFSAT network was operating and therefore, a Working Group for the Migration of the CAFSAT network (**Decision SAT14/13**) was set up and this group ensured successfully the migration process of all the CAFSAT Network on the **IS-901, Transponder**

36/36 without any mayor interruption of service. Furthermore some of the network's features will be modernize taking into account the technology changes.

2.3 Interconnection

2.3.1 At the request of various SAT meetings (SAT/13 and SAT/14), the CAFSAT and AFISNET networks have been inter-operating since 2009 thanks to the installation on the one hand of a CAFSAT station in Nouakchott (Mauritania) and of an AFISNET station in Las Palmas (Spain) on the other hand.

2.4 Performance of the network

2.4.1 The diagrams of availability of the main AFTN and ATS/DS circuits are presented in Appendix to the present paper. For the ATS/DS, one can note a global satisfactory service availability except on the Dakar/Sal circuit which experimented disturbances during nearly two (02) months at the end of year 2009. For the AFTN the behavior of the network is satisfactory except for the Dakar/Las Palmas and Dakar Johannesburg circuits which faced light disturbances.

2.4.2 It should be noted that, in spite of recommendation **9/4 of AFI/7 (Performances of AFTN circuits)** and the decision **16 /12 of APIRG/16 (Follow up of the performances of the Aeronautical Fixed Service)**, some States do not subject the necessary information yet in good time.

2.5 Management of CAFSAT network

2.5.1 The first meeting of the Working Group of the SAT 14, SAT14/TF/1 (Sal, Cape Verde, 10-12 June, 2009) noted the information given on the activities of the Working Group for the Migration of CAFSAT network and recognized that this group had carried out its mandate successfully.

2.5.2 The meeting of the Working Group for the Migration of CAFSAT network (Madrid, Spain, 2-3 July, 2008) made recommendation **1/7** asking for the creation of a board of management of CAFSAT network on the model of the SNMC which is currently in charge of the management of AFISNET network in order to satisfy recommendation **6/19 (Planning, implementation and operation of very small Aperture terminal (VSAT) networks in the AFI Region)** of RAN/AFI SP meeting (Durban, South Africa, 241 - November 29th, 2008).

2.5.3 Based on this recommendation the Working Group of the SAT 14, SAT14/TF/1 approved this proposal for the creation of the Committee for the Management of CAFSAT Network. This committee could be set up during the next meeting of SAT/15 programmed to be held in Lisbon, Portugal from 19 - 21 May 2010.

3. Actions by the meeting

3.1 The meeting is invited to:

- a) Note the information provided in the present note of information; and
- b) Encourage CAFSAT nodes countries to:
 - Persevere in the co management of the Network by setting up the CAFSAT Network Management Committee;
 - Reinforce the mechanisms of interregional co-operation (EUR/SAM/AFI) in the operation, the Maintenance and the management of CAFSAT network

.... END

Appendix

Year 2009 Availability of ATS/DS and AFTN circuits on CAFSAT in WACAF aeria

Year 2009 Availability of ATS/DS circuits on CAFSAT

Link	Support	Rate	January	February	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Min	Max	Aver.
LAS-PALMAS	CAFSAT	9.6kbits/s	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
SAL	CAFSAT	9.6kbits/s	100	100	100	100	100	100	100	100	5,35	3,9	100	100	3.9	100	94
RIO	CAFSAT	9.6kbits/s	100	100	100	100	100	100	100	96	98	100	100	100	96	100	99

Year 2009 Availability of ATS/DS and AFTN circuits on CAFSAT in WACAF aeria

Link	Support	Rate	January	February	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Min	Max	Aver.
CASA	CAFSAT	8kbits/s	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
LAS-PALMAS	CAFSAT	8kbits/s	100	100	99	100	100	77	98	100	90	100	100	100	77	100	97
SAL	CAFSAT	8kbits/s	100	100	100	100	100	100	99	100	100	100	100	100	99	100	100
JOBURG	CAFSAT	8kbits/s	99	100	100	100	100	98	99	73	99	100	100	100	73	100	97
RIO	CAFSAT	8kbits/s	100	100	100	100	100	100	100	96	98	100	100	100	96	100	99