



INTERNATIONAL CIVIL AVIATION ORGANIZATION

Third Meeting of the APIRG Communications, Navigation and Surveillance Sub-Group (Nairobi, 26-30 April 2010)

Agenda Item 4: Aeronautical Fixed Service (AFS)

Review of the implementation and performance of the Aeronautical fixed telecommunication network (AFTN) in the AFI Region, identification of deficiencies and remedial action for their elimination AFTN message transit time statistics

(Presented by the Secretariat)

SUMMARY
<p>This paper reviews the implementation status of AFTN circuits and their performance, and identifies deficiencies and remedial solutions for their elimination.</p> <p>Action by the meeting is at paragraph 3.</p> <p>REFERENCE: APIRG/16 – Report. CNS/SG/2– Report SARAN - Report</p>

1 INTRODUCTION

1.1 NAFISAT and SADAC II networks became operational in November 2007 as a result, 97% of the AFTN circuits became operational. By the end of 2007 with the interconnecting circuits implemented (see **appendix A**) all AFTN circuits in AFI Region were implemented. The only problems with AFI AFTN circuits were the performance of some part of the AFISNET circuits. These circuits were implemented in 1996 and are beyond their lifespan.

2. DISCUSSION

Review of AFTN performance

2.1 The requirement of 97% minimum availability rate (AFI/7 Rec. 9/3) was obtained by all circuits except few of AFISNET circuits (see **Appendix B and C**). From the attached graphs only 20 percent of communication centres submitted their monthly availability returns to the regional office. The meeting is reminded of AFI/7 Rec 9/4 – *That States operating AFTN circuits arrange for the monthly recording of circuits performance charts and for the exchange of completed forms between the stations concerned with copy to the relevant ICAO Regional office*. All Communication centres are to submit their available monthly circuits to the Regional office.

Modulation rates

2.2 All main Circuits except Alger/Casablanca (to be confirmed) are on modulations greater than 1200 bauds .

Transit time Statistics

2.3 With almost all AFTN circuits operational, the transit time of 5 minutes maximum for high priority messages and 10 minutes maximum for other messages are being met. However, about 20 percent of States submit the transit time Statistics. During the survey for missing flight plans, decision was made for States with the inter-regional circuits to submit both the monthly statistics and the transit time statistics to Nairobi and Dakar office. The meeting may wish to recommend this decision to APRG/17.

Implementation Status of AFTN circuits

2.4 All AFTN circuits have been implemented.

Identification of deficiencies

2.5 The AFISNET network is still experiencing difficulties. A complete change of the VSAT nodes for nodes that are over 20 years are needed. The following circuits have not been operational:

Kano/Accra
Kano/Niamey (not be Confirmed)

Remedial actions

2.6 The States involved should consider replacing the old VSAT nodes and when implementing the new nodes, consideration should be given to the SAFRAN recommendation on guideline for VSAT implementation (see **appendix X**)

3. ACTION TO BE TAKEN BY THE MEETING

3.1 The meeting is invited to:

- a) take note the information above; and
- b) all States are urged to forward the AFTN statistics to the regional offices.
- c) Monthly AFTN availability Statistics of the inter-regional circuits should be forwarded to both Nairobi and Dakar offices

RECOMMENDATION

- 1) THE VSAT NODES THAT ARE OVER 20 YEARS OLD AND ARE NOT FUNCTIONING SHOULD BE REPLACED; AND**
- 2) WHEN IMPLEMENTING NEW VSAT NODE SAFRAN RECOMMENDATION SHOULD BE TAKEN INTO CONSIDERATION.**

Attachment A

VTNS VSAT Network Replacement and Implementation

AFISNET Interfaces

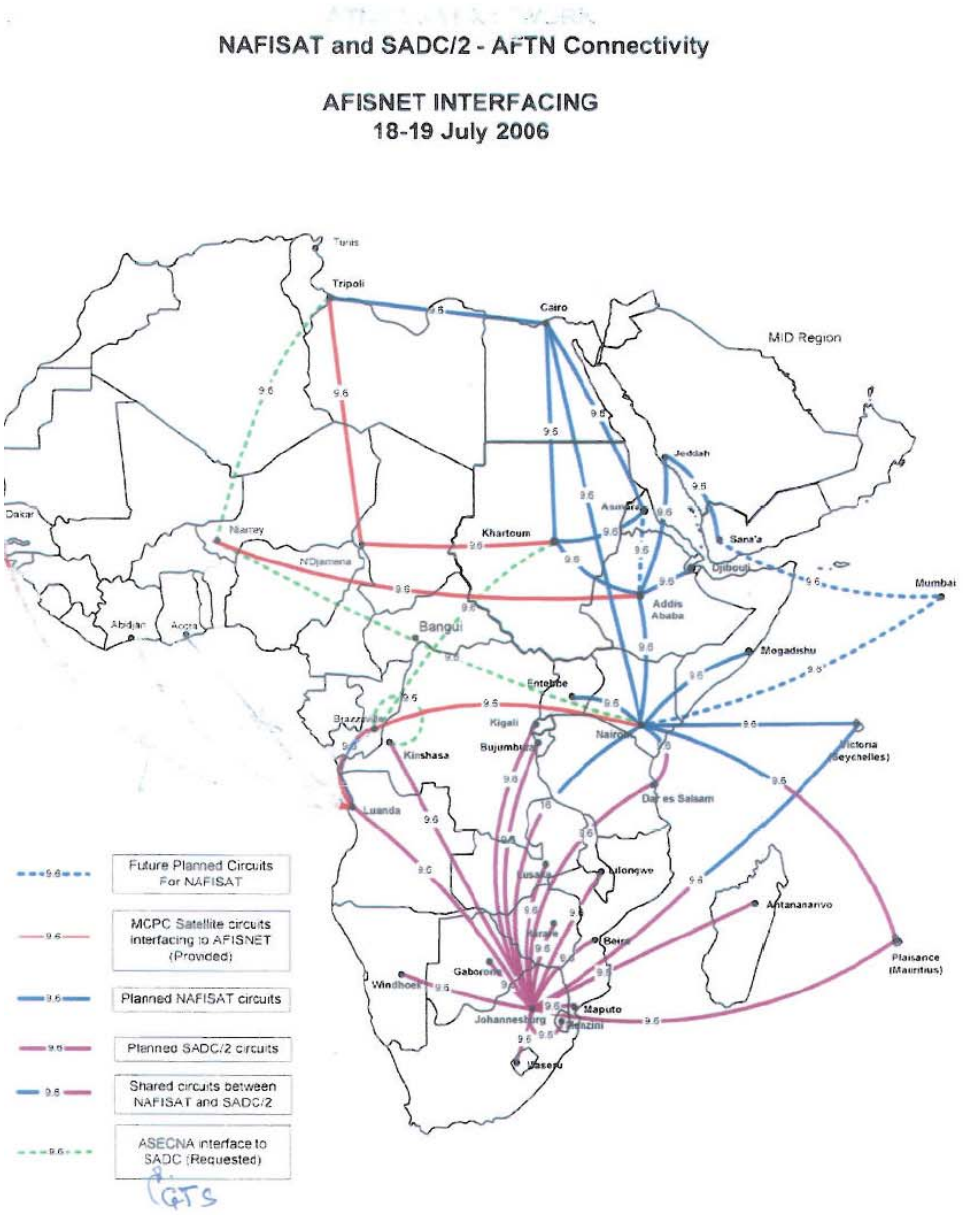


Diagram 2: AFTN Circuits

Attachment B


AFTN availability
ESAF 2009.xls


AFTN availability
ESAF 2008.xls