



**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 Services (AFS)**

*(Presented by ATNS)*

<b>SUMMARY</b>
----------------

This paper provides an update on the implementation and the performance of the NAFISAT and SADC2 VSAT networks in the AFI Region
--

**1. INTRODUCTION**

- 1.1. The purpose of the information paper is to provide feedback on the implementation of the NAFISAT and SADC2 networks, the interconnection of the networks with other networks as well as a summary of the performance for the period 1 April 2009 to 31 March 2010.
- 1.2. The implementation of the networks have commenced after approval by the SADC VSAT Supervisory Board and the NAFISAT Supervisory Committee in April 2006 of the appointment of the contractor.

**2. DISCUSSION**

**2.1. Implementation**

The SADC2 and NAFISAT networks were commissioned on 1<sup>st</sup> November 2007 and 1<sup>st</sup> April 2008 respectively. The late signature of the bilateral agreement with some Sates and the subsequent late delivery of their equipment resulted in a delay in the anticipated implementation dates of August 2007 for the SADC2 networks and September 2007 for the NAFISAT network.

## 2.2. Interconnection

The tables 1 and 2 below lists the AFTN and ATS/DS interconnections of NAFISAT and SADC sites with neighboring networks. In addition to the interconnections listed, future AFTN and ATS/DS interconnections are also planned between Sana'a, Nairobi and Victoria in NAFISAT and Mumbai.

**Table 1: AFTN**

Network	Site	Neighboring Network	Site
NAFISAT	Tripoli	ASECNA	N'Djamena
NAFISAT	Khartoum	ASECNA	N'Djamena
NAFISAT	Addis Ababa	ASECNA	Niamey
NAFISAT	Nairobi	ASECNA	Brazzaville
SADC2	Luanda	ASECNA	Brazzaville
SADC2	Luanda	Ghana CAA	Accra

**Table 2: ATS/DS**

Network	Site	Neighboring Network	Sites		
NAFISAT	Tripoli	ASECNA	Niamey	N'Djamena	
NAFISAT	Khartoum	ASECNA	Brazzaville	N'Djamena	
SADC2	Luanda	ASECNA	Brazzaville	Abidjan	Dakar
SADC2	Luanda	Ghana CAA	Accra		

## 2.3 Performance

Appendix A to D and Appendix E to H below shows the performance of the two networks for the period 1<sup>st</sup> April 2009 to 31<sup>st</sup> March 2010 for NAFISAT and SADC2 respectively. Appendix A and E show the number of calls made during each month for the two networks. The guaranteed ATS/DS call success rate is set at 95% and it can be seen that the networks complied with this requirement, as per Appendix B and F.

Appendix C and D show the average ATS/DS and AFTN circuit availability for the NAFISAT network. The availability requirement is 98.5% and it can be seen that the network exceeds this requirement for each month.

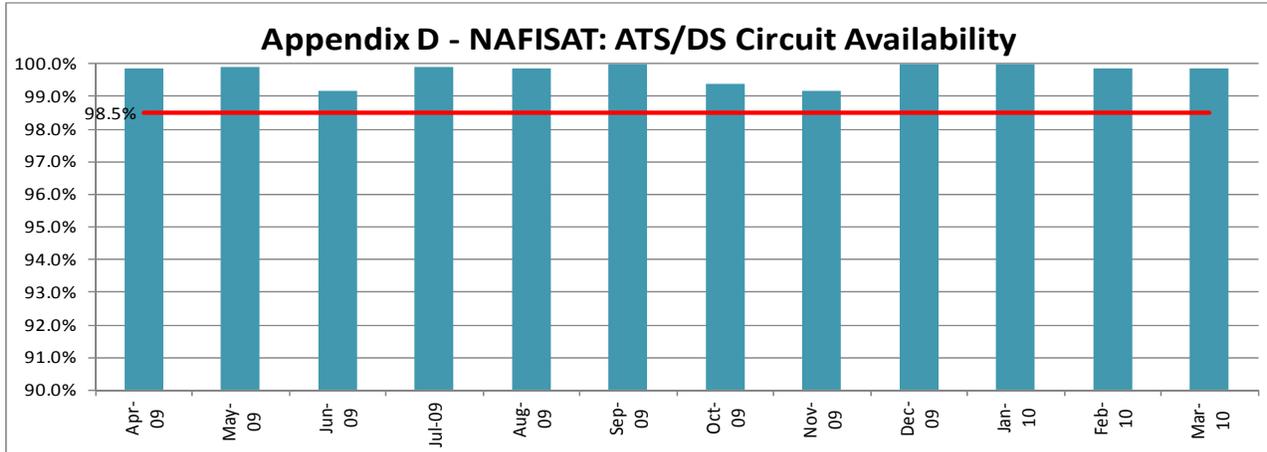
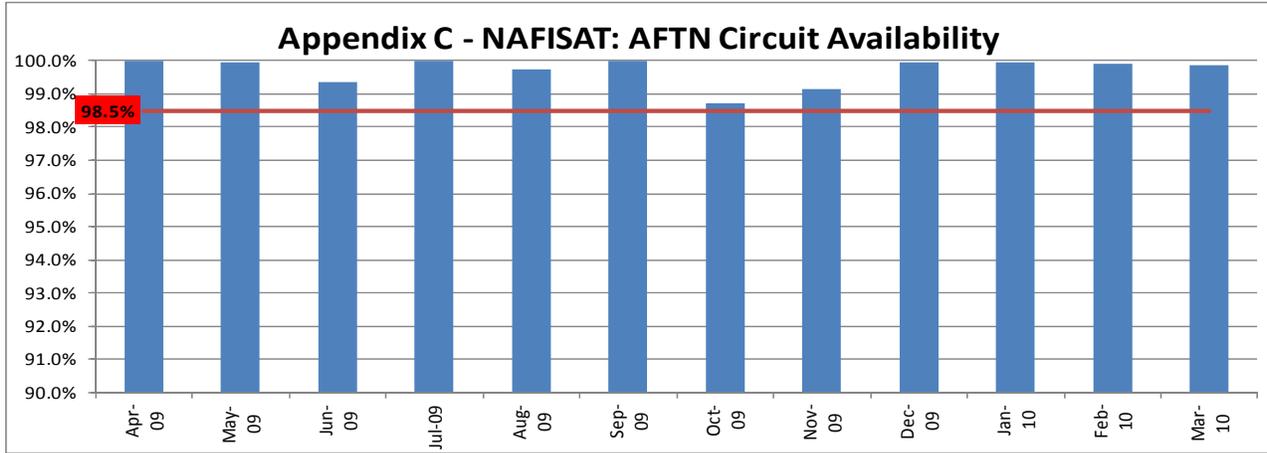
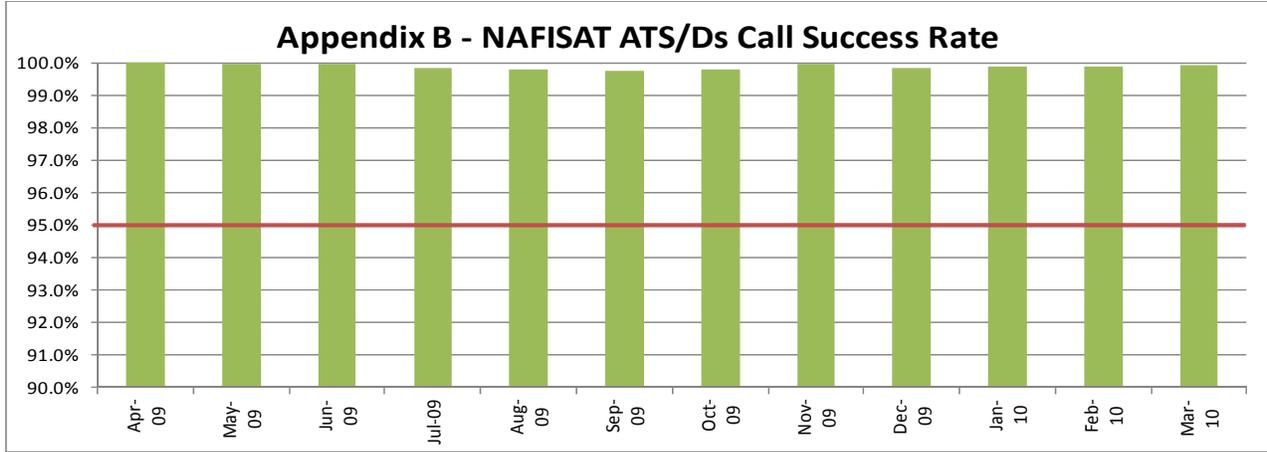
Similarly Appendix G and H show the average ATS/DS and AFTN circuit availability for the SADC2 network. Again average availability complies with the required 98.5% for each month.

It should be noted that the AFTN and ATS/DS availability figures did not take into account external factors e.g. interference from (illegal) external RF resources, failure of peripheral equipment (i.e. AFTN switches and Communication Control Systems) connected to the VSAT terminals in each country.

**3. CONCLUSION AND ACTION BY THE MEETING**

- 3.1 Both networks are providing reliable AFTN and ATS/DS services in the SADC and NAFISAT regions as well interconnections with other networks.
- 3.2 The CNS/SG meeting is therefore invited to:
- a) Take note of the information provided
  - b) utilize the information in the discussions of the meeting.

Appendix A: NAFISAT ATS/DS Calls Summary												
Description	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
Total calls	23,803	27,342	22,905	26,053	23,119	25,680	22,968	24,415	29,387	28,997	11,100	17,604
Successful calls	23,802	27,339	22,896	26,013	23,068	25,618	22,921	24,408	29,343	28,969	11,086	17,589



Appendix E: SADC ATS/DS Calls Summary												
Description	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
Total calls	29,049	51,941	78,502	87,697	48,096	70,511	39,433	35,853	38,154	47,731	13,487	30,178
Successful calls	28,572	50,559	74,473	83,372	46,492	68,018	38,490	35,257	37,372	46,113	13,198	29,580

