8th NAFISAT SUPERVISORY COMMITTEE MEETING
(Mahe, Seychelles, 25 – 26 March 2013)

Agenda Item 7:   Matters arising

7.3. Implementation of APIRG Conclusions and Recommendations of relevance to NAFISAT Network

Interconnection and Interoperability between NAFISAT and neighboring networks

(Presented by ATNS)

SUMMARY
This working paper presents information on the formalization of the process of providing interconnectivity between the NAFISAT network and neighbouring networks and the cost implications to the providing new interconnections.

References:
• ICAO Doc 7474 (ANP/FASID) – Guidelines for multinational facility/service • SNMC/19 and SNMC/20 conclusions

1 BACKGROUND

1.1   Although NAFISAT, ASECNA and other Civil Aviation Authorities have a number of interconnection in place in respect of the NAFISAT and AFISNET networks, these links are operated at this stage without any formal arrangements in place in respect of technical, operational and financial responsibilities.

1.2   The first meeting of the AFI VSAT Managers (Kwa-Zulu Natal, South Africa, 13 to 15 June 2011) established a set of Best Practices, which contained, amongst others provisions, that State's commitment should be formalized and documented, including delegation of operational,

technical and financial authority, as stipulated in ICAO Doc 7474 (ANP/FASID) – Guidelines for multinational facility/service.

2 **DISCUSSION**

2.1 It was therefore proposed at SNMC/19 that ASECNA and ATNS engage in discussions to establish formal arrangements in regard to these interconnecting links. A draft agreement has therefore been prepared and submitted to SNMC/20 that covers the following clauses for all existing and any future Aeronautical Fixed Services.

2.1.1 The objective of the arrangements and proposed solution;

2.1.2 Clauses to regulate the methods, procedures and steps used to implement the AFS links, as well as governance of the relationship between the parties;

2.1.3 Financial arrangements in respect of the purchase of equipment, cost of installation, running cost i.e. the utilization of space segment, maintenance, etc.

2.1.4 Provision by all parties of technical information and specifications to ensure an effective and fully functional solution;

2.1.5 Functions of the AFS to provide services as agreed between the two parties;

2.1.6 Fault reporting procedures including contact details of fault reporting facilities in place, availability reporting, etc.

2.1.7 Term of the agreement, arrangements for extension and applicable arrangement for amendment or termination of the services.

2.2 The interconnections, as listed in the attached Annexure A I), shows the existing interconnections that were implemented as part of the NAFISAT network and were therefore also financed as part of the network.

2.3   According to the draft agreement each party will be responsible for any hardware required and maintenance cost for any new interconnections, while the satellite spectrum required will be the responsibility of the party that requested the service.

2.4   Annexure A II) shows the planned new interconnections. The NAFISAT provides interconnectivity between the ATC Centers for the participating States as well as interfaces with ATC Centers of adjacent networks per the requirements of the Rationalized AFI AFTN plan. States that require additional circuits will therefore have to bear the cost for the implementation and operation the relevant circuits.

2.5   Annexure B I) show additional interconnections requested by the RVA in the DRC. These interconnections require two new VSAT terminals at Lubumbashi and N'dola to communicate with the SADC VSAT terminals as listed. The two new terminals offered will be based on the NDSatcom IDU7000 as the IDU5000 is not manufactured by ND Satcom anymore. Any network extensions or new terminals can therefore only be accommodated and implemented in a cost effective manner if the network is also upgraded to the IDU7000 platform.

Although the above-mentioned requirements apply to SADC VSAT II, it also illustrates the requirements to upgrade the NAFISAT network to ensure cost effective solutions for interconnectivity e.g. a new VSAT terminal for South Sudan.

3 SUGGESTED ACTION TO BE TAKEN BY THE MEETING

3.1   It requested that the Meeting considers the information provided and take note of the following implications for the NAFISAT network.

3.1.1   Any new extensions of the NAFISAT network or new terminals will only be cost effective if the NAFISAT network operates using the same technology.

3.1.2   The interconnections with ASECNA (AFISNET) will continue to operate using the existing solution for the time being. However, should AFISNET be upgraded to the same technology platform, it will be to the advantage of the NAFISAT network to operate using the new MF-TDMA IDU7000 platform.

3.1.3   States that require additional circuits will have to carry the cost for the implementation and operation of the relevant circuits

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I)	List of Existing Interconnections between the NAFISAT network and AFISNET network		
Item	**Interconnection**	**Applicable Networks**	**Services**
1	Tripoli and Niamey	NAFISAT and AFISNET	ATS/DS
2	Tripoli and N'djamena	NAFISAT and AFISNET	ATS/DS and AFTN
3	Khartoum and N'djamena	NAFISAT and AFISNET	ATS/DS and AFTN
4	Khartoum and Brazzaville	NAFISAT and AFISNET	ATS/DS
5	Addis Ababa and Niamey	NAFISAT and AFISNET	AFTN
6	Nairobi and Brazzaville	NAFISAT and AFISNET	AFTN

II)	List of New Interconnections between the NAFISAT network and AFISNET network		
Item	**Interconnection**	**Applicable Networks**	**Services**
1	Seychelles and Comoros (Moroni)	NAFISAT and AFISNET	ATS/DS

I)	**List of Requested New Interconnections between SADC VSAT II and DRC**		
Item	**Interconnection**	**Applicable Networks**	**Services**
1	Lubumbashi and Lusaka	SADC and DRC	ATS/DS
2	Lubumbashi and N'dola	SADC and DRC	ATS/DS& AFTN
3	Lubumbashi and Kinshasa	SADC and DRC	ATS/DS& AFTN
4	Lubumbashi and Dar es Salaam	SADC and DRC	ATS/DS
5	Lubumbashi and Bujumbura	SADC and DRC	ATS/DS