INTERNATIONAL CIVIL AVIATION ORGANIZATION
EASTERN AND SOUTHERN AFRICAN (ESAF) OFFICE

THIRTEENTH MEETING OF THE NAFISAT SUPERVISORY BOARD (NAFISAT-SVB/13)
(DAR-ES-SALAAM, TANZANIA, 7 – 8 NOVEMBER 2018)

Agenda 3: Interconnection and Interoperability of NAFISAT with its 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 related implications.

References:

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

1 BACKGROUND

1.1 The interconnectivity and interoperability of the AFI VSAT networks is paramount to providing safe and reliable aeronautical fixed services throughout the AFI region. Over and above the established domestic VSAT networks (operated by the various Civil Aviation Authorities) in the continent, three major networks are in operations, namely the NAFISAT, SADC VSAT II and AFISNET (operated by ASECNA).

1.2 On the backdrop of several regional and bilateral engagements, ATNS and ASECNA have established a framework in the form of a Memorandum of Understanding, aimed at providing common governing principles for the establishment and maintenance of these inter-network connections. This framework defines the requisite operational, administrative, technical and financial responsibilities of both the network service providers and affected member states.

1.3 The signing of the MOU by ATNS and ASECNA in December 2017 is premised on the conclusions of the first meeting of the AFI VSAT Managers (Kwa-Zulu Natal, South Africa, 13 to 15 June 2011) and the SNMC -19 and SNMC -20 meetings.

2 DISCUSSION

2.1 For ease of reference, the context of the MOU between ATNS and ASECNA can be summarised as follows:

2.1.1 Setting the objective of the arrangements and defining the proposed technical solution to achieve interconnectivity and interoperability;

2.1.2 Regulation of 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 Sharing of technical information and specifications amongst all affected parties to ensure an effective and fully functional solution;

2.1.5 Functions of the AFS to provide services as agreed between the 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 existing interconnections, as listed in the attached Annexure A-I), shows the existing interconnections that were implemented as part of the NAFISAT network and were also retained during and after the upgrade of the network. The operational performance of these interconnections is reported on an annual basis, and for this reporting period please refer to WPxx.

2.3 After the signing of the MOU in 2017. ATNS and ASECNA convened the first technical working committee, with the aim of sharing experiences and technical information on the development of a seamless and common AFI AFS VSAT

infrastructure. The first meeting was held in Dakar, Senegal on from the 12th to the 16th of February 2018.

2.4 Two key outcomes of the meeting are presented in this report. These are:

2.4.1 Requests for additional interconnection links, and

2.4.2 AFISNET Upgrade plans.

2.5 It emerged during technical discussions that additional interconnections are required at various nodes and some of the affected States have been engaged by ASECNA. Annexure A-II shows the additional interconnections requested by ASECNA. These interconnections will be implemented through the agreed technical solution should they be agreed to by the affected States.

2.6 ASECNA has also indicated that the final plans for the modernization and re-engineering of AFISNET are eminent, however no definite timelines have been shared. It was however agreed at the meeting to replace all MEMOTEC CX series equipment interconnecting to NAFISAT with the MEMOTEC Net performer. The initial target date for this intervention was 31 August 2018, but due to unforeseen circumstances ATNS and ASECNA will coordinate this exercise and realign the implementation date.

3 SUGGESTED ACTION TO BE TAKEN BY THE MEETING

3.1 It is 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 AFISNET nodes and NAFISAT nodes operate using the same technology.

3.1.2 The member States are also encouraged to inform ATNS of any request for additional interconnections by ASECNA or between the States themselves that may have an impact on the NAFISAT network.

3.1.3 The affected Member States are also requested to indicate that status of their engagements with ASCENA (if any) with regards to the additional interconnections.

I) List of Existing Interconnections between NAFISAT network and AFISNET network			
Item	**Interconnection**	**Applicable Networks**	**Services**
1	Tripoli and Niamey	NAFISAT and AFISNET	ATS/DS and AFTN
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	AFTN
5	Addis Ababa and Niamey	NAFISAT and AFISNET	AFTN
6	Nairobi and Brazzaville	NAFISAT and AFISNET	AFTN

II) Additional interconnections between NAFISAT network and AFISNET network				
Item	**Interconnection**		**Applicable Networks**	**Services**
1.	Moroni	Seychelles	NAFISAT - AFISNET	ATS/DS - AIDC Planned AFTN – AMHS Planned
2.		Dar es Salaam		