



INTERNATIONAL CIVIL AVIATION ORGANIZATION
EASTERN AND SOUTHERN OFFICE

First Meeting of the AFI VSAT Networks Managers (AFI VSAT/1)
(Kwa-Zulu Natal, South Africa, 13 to 15 June 2011)

Agenda Item 2a: Presentation of AFI VSAT Networks

NAFISAT INSTITUTIONAL FRAMEWORK

(Presented by KENYA)

SUMMARY

This paper provides the background of NAFISAT and discusses the Institutional Framework and Membership.

Reference: NAFISAT MOU and Bilateral Contracts between States and the Network Provider

1. INTRODUCTION

1.1 In Civil Aviation having information at the appropriate place when required is critical to safety. The Aeronautical Fixed Telecommunication Network is a rationalized worldwide Network designed for the purpose of Aeronautical data exchange amongst states and is implemented by a combination of AFTN Switches and data circuits.

1.2 The rationalized ATS-DS plan enables Adjacent FIRs to use voice communication for traffic coordination. There are several other services that require inter State communication. For many years these circuits were implemented by Terrestrial links and some remained un- implemented due to either geographical issues or level of development of Telecommunications in many countries. Many of the implemented ones had low reliability due to inherent weaknesses of terrestrial systems.

1.3 The Airlines through IATA decided to be part of the solution and were willing to contribute towards the improvement of communications by implementing VSAT Networks in the whole of Africa. To resolve these shortcomings, the June 2001 APIRG 13 meeting held in Sal, Cape Verde adopted Conclusion 13/15 recommending the establishment of the North Eastern African Indian Ocean VSAT Network (NAFISAT) covering and providing services over Chad, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Tripoli, Mogadishu, Entebbe, and Uganda.

2. DISCUSSION

2.1 Background

2.1.1 An informal CNS/ATM co-ordination meeting was held in September 2001 in Nairobi attended by Djibouti, Eritrea, Ethiopia, Kenya, Mogadishu, Entebbe and Uganda. It discussed the basic principles of establishing the NAFISAT network and adopted two conclusions of its own, the first being that AFI States concerned by the APIRG 13/15 Conclusion advise ICAO in principle of their participation in the NAFISAT network, and the second establishing a Working Group for the NAFISAT implementation composed of Kenya, IATA and ICAO.

2.2. Pre-implementation activities

2.2.1 The Working Group convened for the first time in January 2002 and noted that all AFI States named in the APIRG Conclusion 13/15 agreed in principle to participate in the proposed NAFISAT network.

2.2.2 The meeting further proposed that adjacent States to the “NAFISAT” Region, i.e. Democratic Republic of Congo, India, Rwanda, Saudi Arabia, Seychelles, Tanzania and Yemen be invited to participate in the implementation of the NAFISAT network.

2.2.3 IATA presented the Working Group with a proposed institutional and funding mechanism following which the Working Group requested that the proposal be refined and circulated to the participating member States for comment and consultation.

A second Working Group meeting was held in September 2002 at which the proposed architecture based on a Multi Channel per Carrier Frame Relay VSAT technology platform together with a basic costing and network implementation concept were presented.

2.2.4 The concept proposed the circuits to be supported, the Management structure, and the funding mechanism where Airlines would contribute directly through cost recovery once the Network was operational.

2.2.5 The Working Group concluded that the architecture and implementation concept should be circulated amongst participating States and tasked IATA to prepare a business case for the implementation.

2.2.6 The First Meeting of NAFISAT States took place on 4 and 5 February 2003 in Nairobi and it reviewed the work completed by the Working Group. In particular the VSAT architecture proposed, costing and implementation concept as applicable to the NAFISAT Region was reviewed. This received the support of participating States who saw this as a chance to implement circuits that were difficult to implement or maintain.

2.2.7 The meeting concluded that the NAFISAT network should be interoperable with the SADC network and the MIDVSAT networks under discussion and development at the time and be implemented on the same satellite. Inter operability with the existing AFISNET was to be implemented through the cooperation of the two Network Providers.

2.2.8 The meeting further concluded that the selection of a Network Provider and the implementation of the NAFISAT network be subjected to an international invitation to tender structured around neutral technical specifications. The meeting also agreed to task IATA, in co-ordination with ICAO, to prepare a detailed tender documentation set and that such documentation be approved by the NAFISAT Management Committee by July 2003.

2.2.9 The selection of a Network Provider competitively was found difficult to implement in the absence of an existing institutional framework and funding mechanism and after consultations on possible scenarios, the Working Group opted to support a joint proposal from IATA and ATNS for the provision and operation of the NAFISAT network and circulated it to the Member States for consideration.

2.2.10 The Second Meeting of NAFISAT States was held on 6 and 7 July 2003 to review and adopt the circulated joint IATA/ATNS Network Provider proposal. The meeting accepted the joint IATA/ATNS proposal and designated ATNS/IATA as the NAFISAT Network Operator. The meeting further concluded that a Memorandum of Understanding be developed defining relationships and the concept for the implementation of the NAFISAT Network aiming to have it signed by the Member States at the 35th ICAO Assembly in Montréal.

2.2.11 In October 2004 at the ICAO Assembly in Montréal, the Memorandum Of understanding was signed by Sudan, Seychelles, IATA and ATNS. A number of other member States requested clarifications and review of the Memorandum of Understanding. Eventually thirteen States signed the MOU by 2006 enabling the implementation process to commence.

2.3. Institutional Framework

2.3.1. Objective: To provide support for ATS communications in ATS-DS, AFTN (migration to ATN), FDPS, OPMET, AIS data exchange, and any other agreed Aeronautical service between the NAFISAT States.

2.3.2. MOU: It was agreed that an MOU be signed by NAFISAT States, ATNS and IATA to define the relationships.

2.3.3. Membership: The members are Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Somalia, Sudan, Tanzania, Uganda, Saudi Arabia, Seychelles and Yemen.

2.3.4. Management: The Network was funded, implemented and is managed, operated and maintained by the Network Provider consisting of IATA and ATNS of South Africa on behalf of the Members.

2.3.5. Supervisory Committee: Each State, the Network Provider and ICAO, as Secretary, are represented in this committee that meets once a year to oversee the performance of the Network Provider and approve the Budget and any major developments.

2.3.6. Cost Recovery: The network provider recovers its cost by a bilaterally agreed on cost recovery mechanism where for most States Airlines contribute directly on the basis of the number of flights that cross the NAFISAT region FIRs.

2.3.7. Ownership: The Network Provider owns the Network and equipment in 11 States on behalf of the States until Its expenses are fully recovered. Two States opted to purchase their VSAT equipment and directly pay for their share of operational costs and so do not provide Statistics on FIR crossings by Aircraft.

2.3.8. Implementation: The Network was implemented once all the Members had signed the MOU and became operational in the year 2008 and was commissioned in July 2009.

3. ACTION TO BE TAKEN

3.1 The meeting is invited to note the NAFISAT institutional framework as explained above and make reference to it in discussing the future implementation of VSAT Networks in the AFI Region.
