

Agenda Item 9.3 - Status of the data collection for the NAFISAT Network.

(Presented by ATNS)

21st NAFISAT Supervisory Board Meeting

Seychelles, 07 to 08 October 2026

SUMMARY

The current NAFISAT flight data used for billing of the networks is at risk of being compromised due to the ICAO requirements for states to transition from AFTN (Serial Communication) to AMHS (IP based communication). The serial communication method was advantageous to the collection of data for the purposes of billing for FIR crossings on the NAFISAT network. The paper aims to outline options and improvements to be adopted to ensure the continuation of data collection for the purposes of the completeness of network billing.

References:

- NAFISAT MOU
- NAFISAT SBM 20 - 2025

1. Background

- 1.1. The NAFISAT Network is a closed SATCOMS network providing aeronautical fixed services in the NAFISAT regional economic community. Primary services provided on the network are primarily:

- 1.1.1. AFTN data services
- 1.1.2. ATS/DS voice services, and
- 1.1.3. AHMS
- 1.1.4. Other ATN services

The ICAO requirement is for states to transition from AFTN to AMHS and is being coordinated and tracked in the AFI region through the AASPG (African-Indian Ocean aviation safety and planning group). States that have invested in AMHS capable infrastructure are now transitioning their AFTN links to IP based AMHS links.

- 1.2. Agreed NAFISAT Collection methodology.

- 1.2.1. The standard MOU that has been signed by member states do not specify the data collection method for the purposes of billing on the network. The agreement was that States supply the flight data to be used for billing.
- 1.2.2. This data has been not forthcoming and is a challenge, since without flight plan data, billing on the network cannot occur.

2. Status and Proposed Solutions and improvements to Mitigate the Risk

- 2.1. During the 20th NAFISAT SBM different options were proposed and the resolution recorded of the Board was to implement option 2 where ATNS would implement a data collection system that would capture all flight data that would be used for the billing.
- 2.2. This solution requires the installation of data collectors at key node sites (initially Nairobi, Addis Ababa, Cairo and Khartoum) to facilitate the automatic collection of Flight plan data. The data is then transferred on the network to Johannesburg and automatically collated daily.
- 2.3. This information is then fed into the billing software that was developed by ATNS to provide a billing file containing all NAFISAT crossings and supplied to ATNS finance Department for invoicing.
- 2.4. In addition, ATNS imports an X400 file from the Johannesburg AMSS into the billing software.
- 2.5. In the same way it is requested that AMSS systems that can produce an FPL data file similar to the Johannesburg AMSS and be stored in a cloud location and transferred to ATNS. This would be an automated activity and would strengthen the completeness of data capturing.
- 2.6. Another way to assist with completeness is to ask sites to include the FAOR address in each message. In that way the Johannesburg AMSS will capture it.
- 2.7. The States that transitioned to AMHS are providing TCP/IP protocol data.
- 2.8. The States that are still providing an AFTN service are providing Serial data which poses a risk. The serial protocol interfaces are obsolete and there is a strong drive to migrate to IP protocol.
- 2.9. The approaches above will therefore enable 3 layers of data collection across the Networks to mitigate any loss of data on the network. .
 - Layer1: Data collection at identified AMSS nodes
 - Layer2: The collection of the daily x400 files from countries
 - Layer3: The adding of the FAOR address to all AMSS messages

3. Suggested actions to be taken by the Meeting.

It is requested that:

- a) The meeting to take note of the paper and deliberate on the progress made by implementing the agreed solutions ensuring effective revenue collection methods.
- b) Support the migration of AFTN serial protocol data to IP protocol on all related sites that are capable of AFTN IP.

- c) The approval for, where AMSS systems are deployed, the creation of the FPL data file to be made available for downloading for input into the billing software allowing completeness of data and revenue collection.
- d) The approval to include FAOR address on all AMSS systems connected to the NAFISAT Network.