



INTERNATIONAL CIVIL AVIATION ORGANIZATION

TWELFTH MEETING OF THE NAFISAT SUPERVISORY BOARD (MAHE, SEYCHELLES, 20-21 SEPTEMBER 2017)

Agenda Item 7: Difficulties Experienced in the Upgrade of the NAFISAT VSAT terminal in Sana'a, Yemen

(Presented by ATNS)

SUMMARY

This working paper discusses the complications that are experienced as a result of delays in the upgrade of the Sana'a VAT terminal.

References:

- Report of the 11th NAFISAT Supervisory Board meeting

1. Background

- 1.1. The upgrade of the NAFISAT network presented a number of challenges amongst which was the inaccessibility of the NAFISAT VSAT terminal in Yemen.
- 1.2. At this stage, it is not possible to deliver the equipment, conduct a site survey and consequently to upgrade the equipment.

2. Discussion

- 2.1. The initial NAFISAT upgrade implementation schedule assumed that all sites would be accessible to do site surveys and installation work. During the project, it became clear that this would not be the case for Sana'a and thus Sanaa would not be installed in line with the project schedule.
- 2.2. At the 11th NAFISAT Supervisory Board Meeting during 10 and 11 October 2016, ATNS presented a realistic plan where ATNS would pursue an opportunity to conduct the necessary site survey, deliver and install the Sana'a NAFISAT terminal by the end of February 2017.
- 2.3. It was agreed that should this scenario not materialise ATNS will proceed with the transition of services, without Sanaa, to the upgraded network at the end of February 2017.

- 2.4. Access to Sanaa remained impossible and thus the upgrade of the NAFISAT network, without Sana'a, was completed on 16 March 2017.

3. Implications

The continued inaccessibility of the NAFISAT VSAT terminal in Sana'a created several implications for the NAFISAT network.

- 3.1. The primary reason for upgrading the NAFISAT network was to replace obsolete equipment that is no longer supported and to ensure that the network will be capable of handling ICAO IP based applications. The fact that the VSAT facility in Sanaa cannot be upgraded means that Sanaa will not meet these requirements
- 3.2. Both the old and the upgraded network have to be operated simultaneously.
- 3.3. An amount of satellite spectrum must be retained for the old network. The optimization of the satellite spectrum can therefore not be completed until all the terminals in the NAFISAT network have been transferred to the new network.
- 3.4. The indications are that the Sanaa's situation will not change for the foreseeable future.

4. Possible Alternatives

To address the problem the following scenarios could be considered by the meeting

4.1. Continue with the present arrangements

In the short term services should not be interrupted since ATNS has sufficient Memotec and IDU5000 equipment to continue with the maintenance of the Sana'a NAFISAT terminal.

- a) To date ATNS has managed to send spares by courier for replacement of faulty equipment by local technical personnel in Sana'a. However, it will be problematic should it be required for ATNS technical personnel to visit the site for repairs.
- b) In the longer term ATNS may run out of sufficient spares to maintain the NAFISAT terminal in Sanaa reliably.
- c) The current arrangement can only be considered as an interim emergency arrangement and will not be viable in the long term.
- d) It would not be possible to optimize the satellite spectrum.

4.2. Upgrade conducted by local Sana'a technical personnel

This scenario could be considered viable, subject to the following requirements:

- a) It must be possible to deliver at least the minimum equipment required for the upgrade of the VSAT facility. A minimal installation will be conducted i.e. the new equipment will be installed in the existing cabinet.

- b) The technical personnel from Sana'a will have to be trained in Johannesburg to a level where they will be able to install and commission the VSAT equipment.
- c) As ATNS would not be able to inspect the installation and verify the installation work, ATNS will not be in a position to take responsibility for the network Service Level Agreement (SLA) between Sana'a and the interconnected sites.
- d) This scenario would not be possible if Sana'a requires that the VSAT facility be relocated to another location as the upgrade will then be more complex and will require additional equipment and installation and commissioning by ATNS personnel.

4.3. **Intervention by ICAO Middle East Office**

The intervention of ICAO, through negotiations with the United Nations, could be a possibility to attempt to expedite installation.

- a) This would involve the UN providing transportation of the upgrade equipment and making arrangements for ATNS technical personnel to complete the upgrade work under their patronage.
- b) The security of the ATNS personnel must be guaranteed.

5. **Recommendations**

A possible approach could be to explore all scenarios as discussed above, in the following manner.

- 5.1. For the time being operation will have to continue as described in scenario 4.1 as indicated, with the understanding that it could be problematic for ATNS to maintain the agreed SLA. It is suggested that Sana'a be excluded from the calculation of the network SLA.
- 5.2. To allow for the optimization of the spectrum it is suggested that ATNS explore the acquisition of additional spectrum for the planned services and evaluate the cost implication.
- 5.3. In parallel ATNS and ICAO would explore and implement scenarios 4.2 and 4.3 above as a matter of urgency.

6. **Action by Meeting**

It is requested that the meeting:

- a) Take note of the information provided in the Working Paper.
- b) Discuss the recommendations in paragraph 5 above, taking into account the impact thereof, and provide directions on how to proceed.

-END-