



INTERNATIONAL CIVIL AVIATION ORGANIZATION

Western and Central Africa Office

Nineteenth Meeting of the AFI Satellite Network Management Committee (SNMC/19)

(Accra, Ghana 14-18 November 2011)

Working Paper presented by NAMA

1.0 BACKGROUND

At the SNMC 18 meeting in Ouagadougou, Burkina Faso 01-04 June, 2010, some AFISNET dysfunctions were noted as contained in the report of the Joint Technical Team for AFISNET Evaluation and Re-engineering. The conclusions reached include:

a) Conclusion 18/04

That SNMC member states/organizations Endeavour to clear out all the pending identified AFS deficiencies by the end of 2010.

b) Conclusion 18/08:

That States/Organizations are urged to implement the recommendations of the report of the AFISNET Joint Technical Evaluation and Re-engineering Team as presented in Appendix D by focusing their efforts on the following items:

- Clearing current malfunctions
- Upgrade of Multiplexers
- Upgrade of Automatic Messages Switching System
- Upgrade of VCSS
- Redundancy of modems and multiplexers
- Calibration of test equipments

c) Conclusion 18/10:

That when upgrading/replacing Automatic Message Switching systems, Administrations/Organizations should consider backward integration with existing message switches in the emerging technology (AMHS) in order to

ensure the continuity of AFTN service within the transition(AFTN/AMHS) time.

2.0 IDENTIFIED DEFFICIENCIES

NAMA noted with concern the deficiencies peculiar to its Network in 2010 as follows:

- Installed Message Router as an interim stop gap in Kano and Lagos in 2010 did not contain some parameters of a standard message switch. It was unable to send channel checks and sequence numbering that guarantees determination of message availability report even to receiving station. It was temporarily used to eliminate need for numerous point-to-point AIT connections required to link all the respective stations. This accounted for the very poor performance of our AFTN availability status in 2010.

However, on the 4th of July, 2011, new standard message switch systems were installed in Kano and Lagos which has resulted to improved performance in the AFTN availability status as evident in the attached availability chart (Appendix 1and 2).

- Persisted link outage between Kano – Accra. This was as a result of incompatibility in modem parameters. It was subsequently addressed having purchased same DATUM modem as Accra for the link in Kano.

3.0 AFISNET JOINT TECHNICAL EVALUATION AND RE-ENGINEERING

Reference to APPENDIX E (Draft Conclusions of CNS/SG/3 meeting related to SNMC activities) on Conclusions 03/2- AFTN and 03/9- ATS/DS concerning Kano/Accra link, the services have been restored accordingly.

3.1 UPGRADES/PROJECTS

- In compliance to the need for upgrades of systems to ensure enhanced performance, NAMA upgraded its FIR VCSS in Kano (FREQUENTIS) and Lagos

(THALES) as implemented in the TRACON Project which is in line with ICAO CNS/ATM concept. Adjacent FIRs ATS/DS are on FXO as against E/M which was implemented on the VCSS. This results to many telephone boxes on the ACC Consoles which is unhealthy for smooth ATC Operations.

- The issue of MODEMs and MUX redundancies is being addressed.
- NAMA in its Total VHF Coverage project will implement additional node at Wukari for effective coverage of Nigerian Airspace.

PROJECTS ON-GOING IN NAMA INCLUDES:

- AIS AUTOMATION (AIM) AT 26 AIRPORTS INCLUDING NEMA SEARCH AND RESCUE COORDINATING CENTRE AT ABUJA
- AUTOMATED TOWER SYSTEMS (SAFE TOWER) IN KANO AND 13 OTHER AIRPORTS.
- NEW TOTAL VHF COVERAGE OF NIGERIA

4.0 AFTN/AMHS TRANSITION

NAMA takes into consideration backward integration with existing message switches to ensure continuity of AFTN service within the transition (AFTN/AMHS) time when implementing its AIS AUTOMATION Project. Proper frame work will be established to ensure information exchanges with adjacent FIRs as the project progresses.

5.0 EXPLANATORY NOTES ON LAGOS AND KANO AFTN STATISTICS

ACCRA- From July to October 18, 2011, the Accra interface of the switch was disabled and a diversion for all DGAA messages created via Kano and Cotonou as alternate, hence switch statistics loggings for the interface were nil for those periods.

NIAMEY – TX/RX message counts for October were will. The reason: A direct Niamey connection Terminal was established in met office. A second terminal linked with the switch takes care of domestic OPMET interchange, with diversion for Niamey created via Kano.

For Kano, there was failure on the IF patch which affected the links from 29 March – 4 April, 2011

Also, there was Earth Station failure from 12 – 20 August, 2011 due to moisture in the waveguide.

6.0 CONCLUSION

The meeting is enjoined to note the information provided in this working paper with further discussions on:

- Mechanism for effective information sharing among member States/Organizations to ensure harmonious operations
- Collaboration for technical exchange programs/trainings
- General E&M platform for ATS/DS functionality.