



ICAO

SNMC/28 – WP/XX

INTERNATIONAL CIVIL AVIATION ORGANIZATION

WESTERN AND CENTRAL AFRICA OFFICE

Twenty-eighth Meeting of the AFI Satellite Network Management Committee

(SNMC/28)

(Abuja, Nigeria, 6-10 May 2024)

SUMMARY

This working paper provides a progress report on the Replacement of the level 3 equipment (MOL2P Multiplexer) with the Netperformer Multiplexers in Ghana

Reference: Appendix H to the Report of SNMC/24

Conclusion 27/04 of SNMC/27 on upgrade of AFISNET Baseband Equipment:

Action by the meeting in paragraph 3

1. Introduction

The existing baseband system (MOL2P multiplexer), level 3 equipment are obsolete, and its support services are no longer available. This has made it very difficult if not impossible to continue to use the MOL2P multiplexer to support our safety of life services.

2. Discussions

2.1 Prior to the full re-engineering of AFISNRE SNMC 27 agreed to replace the obsolete AFISNET base band equipment Conclusion 27/04 of SNMC/27 on upgrade of AFISNET Baseband Equipment reads as follow: *As a matter of urgency and prior to the completion of AFISNET modernization, SNMC ANSPs endeavour to expedite the replacement of obsolete baseband equipment in order to ensure, within the timeframe of the AFI Regional Air Navigation Plan the continuous operation of AFISNET and the implementation of AMHS.*

2.2 In particular, necessary actions should be conducted and completed before end of April 2020 to upgrade the networks by migrating from the obsolete multiplexers MOL2P to the NETPERFORMER technology.

2.3 In view of the growing need to replace the MOL2P multiplexers, two (2) Netperformer Multiplexers SDM-9230 and three (3) Netperformer Multiplexers SDM-8400 systems with its various interfaces were procured and installed in Accra in 2022. The system provides Private Virtual Circuits (PVC) links for all the ATS/DS and AFTN links on the AFISNET network. The Netperformers were successfully connected to PSM 500 Satellite Modems (Datum Systems).

2.4 The Netperformers, when fully deployed will provide ATS/DS, AFTN and Engineering Service Circuits –ESC (Maintenance Telephone) links to all the neighbouring Air Traffic Services Units (ATSU) when the various links are re-established.

2.5 A coordination meeting (virtual meeting) was held on 15th March, 2023, between ASECNA and GCAA to agree on a schedule for the migration. Parameters for the configuration were also exchanged between the two Air Navigation Service Providers (ANSPs).

AFISNET Links Re-established on Netperformer Multiplexers

| STATION | ATS/DS | AFTN | ESC | REMARKS |
|---------|---------------------------------|---------------------------------|---------------------------------|---|
| ACC-ABJ | Re-established and operational. | Re-established and operational. | Re-established and operational. | Migrated to Netperformers. The links are operational and working satisfactorily. |
| ACC-COT | Re-established and operational. | Re-established and operational. | Re-established and operational. | Migrated to Netperformers. The links are operational and working satisfactorily. |
| ACC-BRZ | Re-established. | Re-established. | Re-established. | Not migrated to Netperformers due to unavailability of DCE cable for AFTN connection. |

GCAA has plans of coordinating with other ANSPs who have migrated to the netperformers to ensure the full migration of all our critical services.

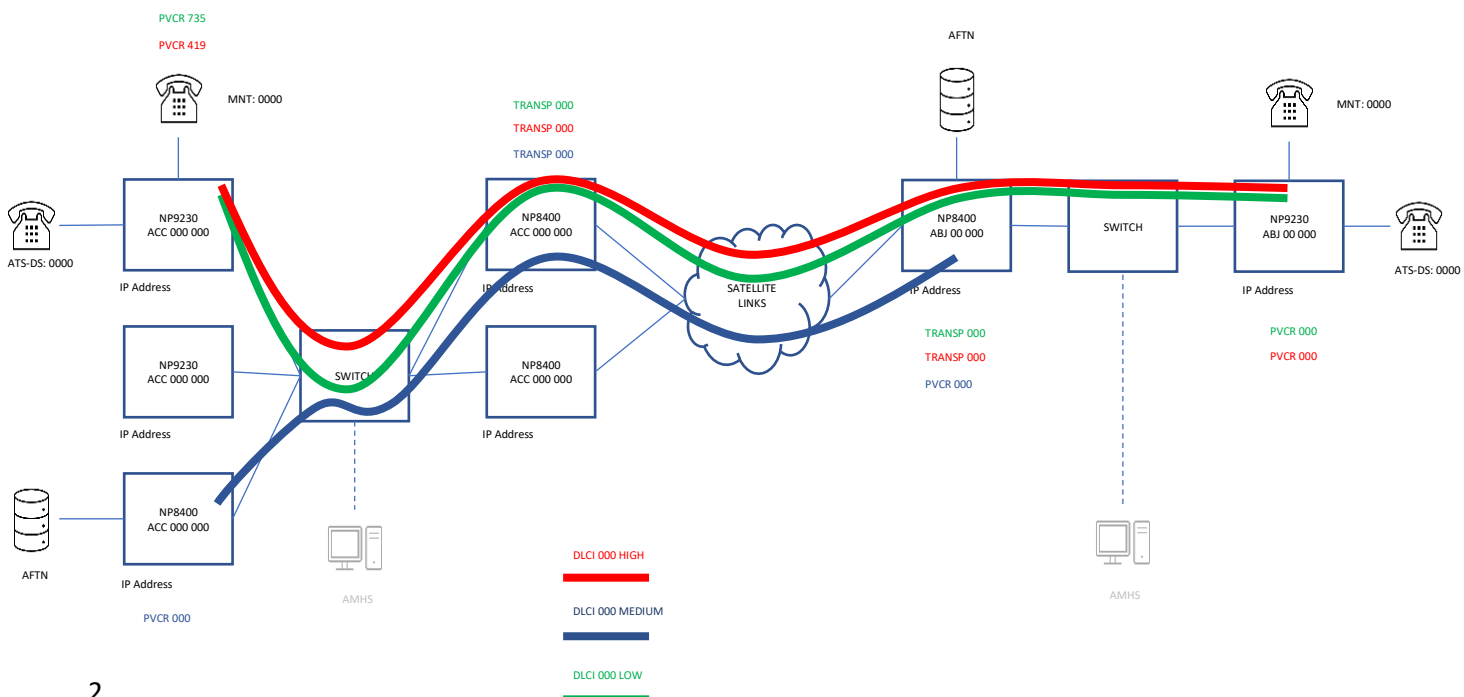




Figure 1: Synoptic Diagram of the Network

2.4 Challenges

- a) Lack of / insufficient training for technical staff.
- b) Coordination challenges which include language barrier, Engineers/Technicians varying levels of commitment, Technical Staff not been prepared to coordinate on scheduled dates etc.
- c) Ensuring cable compatibility for AFTN connections between two stations especially when one station employs IP AFTN connection while the other relies on serial AFTN connection.
- d) Reaching consensus on the selection of PVC IPs

3. Action Required

The meeting is invited to:

- a) Take note of the information provided in this working paper.
- b) Encourage states who have carried out the migration to share their experiences.
- c) Request states to indicate their plans for the migration.
- d) Revive the Technical Exchange Program between ANSPs