INTERNATIONAL CIVIL AVIATION ORGANIZATION
WESTERN AND CENTRAL AFRICAN OFFICE

TWENTY EIGHTH MEETING OF THE AFI SATELLITE NETWORK MANAGEMENT COMMITTEE (SNMC/28)

FINAL REPORT

Abuja, Nigeria 06-10 May 2024

Tᴀʙʟᴇ ᴏғ Cᴏɴᴛᴇɴᴛs

Appendices

PART I – HISTORY OF THE MEETING

1. Introduction

1.1 The Twenty-Eighth Meeting of the AFI Satellite Network Management Committee (**AFISNET SNMC/28)** was held from the **06** to **10 May 2024** at the **Rockview (Royale) Hotel** located within the central district of **Abuja**, **Nigeria.**

1.2 Engr. Ms**. Teresa Ihenachor**, Director of Safety Electronics and Engineering Services in the Nigeria Airspace management Agency (NAMA) in her introductive remarks, welcomed the participants to Nigeria on behalf of the Board, Management and staff of the NAMA. She congratulated the Satellite Network Management Committee for the wonderful job it has been doing to streamline the Technologies, operations and statistics towards ensuring seamless communication within the region and emphasizing collaboration and compliance with adopted contributions.

1.3 Engr. **Farouk A.U,** Chief Executive Managing Director, NAMA in his opening remark recognized the proactive efforts the SNMC have directly contributed to the seamless transfer of air traffic within the AFI (Africa-Indian Ocean) Flight Information Regions (FIRs) by leveraging modern satellite communication solutions, thus, playing a pivotal role in optimizing air navigation procedures and enhancing overall safety standards.

1.4 He advised all SNMC members to maintain a high level of coordination and cooperation by sharing best practices, exchanging relevant information, and actively participating in ongoing initiatives aimed at further enhancing aeronautical satellite communication capabilities.

1.5 He recalled NAMA Commitment to driving forward the evolution of aeronautical satellite communications, aligning closely with the strategy of the AFI Region for planning and implementing Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) components.

1.6 The meeting was opened by Mr **Faniyi Fatogun,** Special Adviser Strategy & Innovation on behalf of the Federal Minister of Aviation and Aerospace Development of Nigeria. He welcomed the participants on behalf of the Government and the People of Nigeria, highlighted the importance of AFISNET for the provision of digital aeronautical communication in and beyond the AFI Region.

1.7 He informed the meeting on the on ongoing initiatives and projects being conducted by the Government of Nigeria in the aviation sector, in particular the projects for modernizing airports and air navigation infrastructure, developing a robust aviation safety and security framework when encouraging private sector investment in the aviation sector.

1.8 He encouraged the participants to collaborate and come up with network concepts and topologies that will assist in achieving relevant ATM operational requirements; ensure the continuous operation of AFISNET to meet the AFI and global CNS/ATM plans, address the challenges of spectrum management and interference, promote international cooperation and knowledge sharing and, decide on the type and level of service to be provided by the network.

1.9 Mr **Faniyi Fatogun** expressed his confidence to the ability of the participants to come out with tangible proposals for the improvement of the network, wished the meeting, successful deliberations and declared it opened.

2. Officer and Secretariat

2.1 The meeting elected Engr. Ms. **Teresa Ihenachor**, Director of Safety Electronics and Engineering Services in NAMA, as Chairperson supplemented by Engr. **Jibrin Okpanachi**, General Manager (EC), NAMA.

2.2 Mr. **François-Xavier Salambanga**, Regional Officer Communication, Navigation and Surveillance, ICAO Regional Office Western and Central Africa, served as Secretary of the meeting and therefore coordinated the preparation of the working and information materials to be presented accordingly.

3.   Attendance

3.1   The meeting was attended by Eighty Five (**85)** participants from four (**04**) Air Navigation Service Providers (***ASECNA-18 African States, GCAA-Ghana, NAMA-Nigeria, the Roberts FIR-Guinea, Liberia, Sierra Leone),*** the Nigerian Civil Aviation Authority (**NCAA**), the Nigeria College of Aviation Technology (**NCAT**), the Nigerian Meteorology Office (**NIMET**), The Aeronautical Instruction Center of Angola (**ENNA-EP**) and **NIGCOMSAT** a representative of the industry.

The list of participants is attached at **Appendix A** to this report.

4.   Working Language

4.1   The meeting was conducted in the English language.

5.   Agenda of the meeting

5.1   The following Agenda was adopted**:**

Agenda Item 1:   Follow up of the Conclusions and Decisions of SNMC/27th meeting (Accra, Ghana, 25-29 November 2019) and the Recommendations of the SNMC Coordination meeting (Accra, Ghana, 17-19 August 2022)

Agenda Item 2:   Review of AFISNET operational and technical statistics of availability

Agenda Item 3: Surveillance data Sharing through AFISNET

Agenda Item 4: Outcomes of APIRG 23rd, 24th, 25th, 26th Meetings with impact on SNMC activities and preparation of APIRG 27th meeting

Agenda Item 5: Outcome of ITU World Radio Communication Conference 2023 (WRC-23) and Spectrum issues

Agenda Item 6:   Re-engineering of AFISNET (*Implementation of Special AFI/RAN meeting Recommendations 6/18*)

Review & Update of actions taken for the re-engineering and modernization of AFISNET.

Agenda Item 7: Interconnection and interoperability of systems through AFISNET (AMHS, AIDC)

Agenda Item 8:   Implementation of Aeronautical Mobile Service on AFISNET

Agenda Item 9: Evolutions in Satellite Communication Technology

Agenda Item 10: Review of the Term of Reference and Work Programme of SNMC

Agenda Item 11: Review of the Draft Conclusions/Decisions of SNMC/28

Agenda Item 12: Any other business

6. Summary of Conclusions and Decisions

The meeting adopted Fourteen (**14**) Conclusions and Seven (**03**) Decisions and tasked SNMC members with specific actions.

Agenda Item 1:   Follow up of the Conclusions and Decisions of SNMC/27th meeting (Accra, Ghana, 25-29 November 2019) and the Recommendations of the SNMC Coordination meeting (Accra, Ghana, 17-19 August 2022)

Conclusion 28/01*: Restart and continuation of SNMC activities*

That:
In order to maintain and improve the performance of the network:

a) **AFISNET core members endeavor to fully restart and increase SNMC coordination activities through the regular holding of SNMC yearly coordination meetings and the relaunch of the conduct of identified projects postponed during the COVID-19 Pandemic;**

b) **In so doing they will, under the coordination of designated ANSPs, update, review and finalize the relevant project documents (including technical specifications and cost estimation) and report to the attention of the AFISNET Board for decision and directives.**

Conclusion 28/02*: Implementation of SNMC outstanding Conclusions/Decisions*

That:
Concerned SNMC member States/Organizations are urged to implement the outstanding Conclusions/Decisions of SNMC previous meetings including those related to SNMC/27's and the Recommendations of the SNMC Coordination meeting as presented in Appendices B and C to this report.

Conclusion 28/03*: Development, promotion of the SNMC Webpage and finalization of the E-Learning project*

That:

Under the coordination of the Roberts FIR, a Task Force of Subject Matter Experts selected amongst the JTE team listed in Appendix D, is established to develop the SNMC Webpage and to review the project document of E-learning for full implementation.
In this regard, the group will explore the way for E-learning partnership with the industry

Agenda Item 2:   Review of AFISNET operational and technical statistics of availability

Conclusion 28/04: *Resolution of AFISNET deficiencies*

That:
 In order to ensure an effective and timely restauration   of AFISNET outstanding and future deficiencies, concerned ANSPs take the appropriate actions aiming at resolving in accordance with the agreed timeline, the outstanding deficiencies as summarized at Appendix E and report to the current SNMC coordinator with copy to the Secretariat.

Conclusion 28/05: **Coordination** *of maintenance operations*

That:
For better successful coordination of maintenance operations, SNMC members:

a) **Endeavor to nominate maintenance subject matter expert focal points and yearly update their details to reinforce bilateral technical coordination.**
b) **Develop when replacing equipment, a maintenance transit plan with an interruption time window, to be shared with concerned neighbors to minimize the impact of the process on circuits availability**

Agenda Item 3: Surveillance data Sharing through AFISNET

Decision 28/06: Continuation *of the surveillance data sharing project*

That:

In order to ensure a continuous, reliable and robust seamless surveillance provision, the surveillance data sharing project is maintained for the integration of data emanating from ground-based surveillance sensors (SSR and ADS-B).
In this regard, the revised Roadmap for surveillance data sharing is adopted as attached in Appendix F

Conclusion 28/07: Implementation of the roadmap of surveillance data sharing

That:

Under the coordination of ASECNA, a Task Force as presented in Appendix G of this report, is established to conduct the task identified by the revised Roadmap for surveillance data sharing.
In this regard, and in accordance with the timeline set forth in the Roadmap for the surveillance data sharing project:

a) SNMC members will provide in a timely manner ASECNA with their surveillance data sharing requirements for satellite spectrum but not later than 31/08/2024;
b) ASECNA will convene a coordination meeting with INTELSAT during which ANSPs will, through a common principle, secure the bandwidth for the surveillance data sharing project.

Agenda Item 4: Outcomes of APIRG 23rd, 24th, 25th, 26th Meetings with impact on SNMC activities and preparation of APIRG 27th meeting

Conclusion 28/08: Alignment of SNMC activities with the regional air navigation plan

That:
In order to avoid duplication and ensure the alignment of SNMC initiatives with the regional air navigation plan, AFISNET members in their planned activities, consider the relevant provision of the APIRG-RASG-AFI with impact on the network.

Agenda Item 5: Outcome of ITU World Radio Communication Conference 2023 (WRC-23) and Spectrum issues

Conclusion 28/09: Secured C-band spectrum for AFISNET

That:
In consideration of the adverse outcome of the ITU recent World Radiocommunication Conference 2023 that allocated the bandwidths 3 300-3 400 MHz & 3 600-3 800 MHz to the 5G   mobile service in a primary basis in region 1, AFISNET members take the appropriate measures to protect the operation of AFISNET in line with Resolution 154 WRC-19 (Rev.) and ensure that in case of migration in an upper frequency band, the new allocation is secured for the safety of life service provision.

Conclusion 28/10: Spectrum requirement for the operation of AFISNET

That:
To ensure a collective approach for spectrum requirements by the satellite service provider:

a) SNMC members provide ASECNA with, but not later than 30/09/2024, their spectrum requirements for circuits to support surveillance data sharing, AMHS interconnection and any other future service for transmission to INTELSAT
b) ASECNA coordinates a concertation of SNMC representatives meeting with INTELSAT to take place not later than 31/12/2024

Agenda Item 6:   Re-engineering of AFISNET (*Implementation of Special AFI/RAN meeting Recommendations 6/18*)
Conclusion 28/11: Update of the project for AFISNET Re-engineering and modernization

That:

In the relaunch of AFISNET Re-engineering and modernization exercise, the SNMC Joint Technical Team (JTE) led by ASECNA is tasked to complete the following assignments not later than 31 August 2024:

a) Review and update the technical specifications and administrative documents of the project including the incorporation of new identified requirements aligned with the AFI regional Air Navigation Plan.

b) Estimate the provisional cost of the project

c) Identify possible funding mechanisms and potential sources of financial resources mobilization

Conclusion 28/12: Future SNMC meeting and SNMC Board coordination meeting

That:

1) NAMA and ASECNA coordinated for a SNMC extraordinary meeting for the adoption of the outcome of the JTE and Tasks Force established to carry on their assigned tasks

2) A Board meeting be convened back-to-back with the SNMC's to update the Board Members on:
   a) The challenges encountered by the network due to its obsolescence and the threat on operation disruption
   b) The maturity of the re-engineering and modernization project as well as the possible funding mechanisms and fund mobilization

Agenda Item 7: Interconnection and interoperability of systems through AFISNET (AMHS, AIDC)

Conclusion 28/13: Implementation of AMHS and AIDC

That:

a) When reviewing the technical specifications for AFISNET Re-engineering and modernization the JTE consider the required transmission rate and therefore the spectrum required to support the successful implementation of IP connectivity on AFISNET to ensure the implementation of AMHS for the transmission of aeronautical digital services (MET, NOTAM, MAP…) and future System Wide Information Management (SWIM) services.

b) Meanwhile, ANSPs are encouraged to continue the successful implementation of AIDC under the AFTN, for the benefit of the ATM operations, in accordance with the regional agreements set forth by APIRG.

Agenda Item 8: Implementation of Aeronautical Mobile Service on AFISNET

Conclusion 28/14: Inclusion of the survey on the availability of remote VHF in the cope of SNMC

That:

In line with APIRG Decision 25/36 on the survey of Aeronautical Mobile Service, SNMC members take the appropriate measures to conduct the evaluation of the availability of the remote VHF stations and report in the Afi Air Navigation Deficiency Data Base (AANDD)

Agenda Item 9: Evolutions in Satellite Communication Technology

Conclusion 28/15: Exploration of new satellite spectrum providers

That:
In the framework of AFISNET re-engineering and modernization, the JTE duly consider in its assigned tasks the exploration for new experienced and reliable satellite spectrum providers to support a potential migration of AFISNET to be included in the technical specifications

Agenda Item 10: Review of the Term of Reference and Work Programme of SNMC

Decision 28/16: **Adoption of the Term of reference and Work Programme of SNMC**

That:

The Term of Reference, Form of Agreement and Work Programme of SNMC are adopted as attached at Appendix H and may be further amended as necessary

Decision 28/17: **Future yearly regular SNMC meetings**

That:
The future yearly regular SNMC meetings are tentatively scheduled along the rotation principle as attached in Appendix I.
The Roberts' FIR will coordinate with the Secretariat for the 2025 meeting schedule.

Agenda Item 10: **Review of the Draft Conclusions/Decisions of SNMC/28**

Agenda Item 11: **Any other business**

PART II – REPORT ON AGENDA ITEMS

Agenda Item 1: Follow up of the Conclusions and Decisions of SNMC/27th meeting (Accra, Ghana, 25-29 November 2019) and the Recommendations of the SNMC Coordination meeting (Accra, Ghana, 17-19 August 2022)

1.1   Under this Agenda item the meeting discussed (**WP/02A**) the status of implementation of the Conclusions and Decisions of the SNMC/27th meeting (Accra, Ghana, 25-29 November 2019). The meeting noted that the COVID-19 Pandemic had a negative impact in the implementation of the outcome of the meeting resulting in a poor rate of effective achievement. The status of implementation of the outcome of the SNMC/28th is presented in **Appendix B** to this report.

1.2   The meeting reviewed (**WP/02B**) the status of implementation of the Recommendations of the SNMC Coordination meeting held in Accra, Ghana, from 17 to 19 August 2022. Convened at the kind invitation of the GCAA, the meeting recorded the attendance by delegates from ASECNA, GCAA, NAMA and the Roberts FIR.

1.3   After deliberating on seven (**07**) agenda items, the coordination meeting identified through six (**06**) recommendations, preliminary actions for the relaunch and continuation of the pending AFISNET related projects to foster the secured implementation and operation of the CNS/ATM services supported by the network and tasked SNMC members with specific action. As presented in **Appendix C,** the SNMC/28th meeting noted that the Recommendations of this coordination meeting were not effectively implemented.

The meeting formulated the following Conclusions:

Conclusion 28/01*: Restart and continuation of SNMC activities*

That:
In order to maintain and improve the performance of the network:

   a) **AFISNET core members endeavor to fully restart and increase SNMC coordination activities through the regular holding of SNMC yearly coordination meetings and the relaunch of the conduct of identified projects postponed during the COVID-19 Pandemic;**

   b) **In so doing they will, under the coordination of designated ANSPs, update, review and finalize the relevant project documents (including technical specifications and cost estimation) and report to the attention of the AFISNET Board for decision and directives.**

Conclusion 28/02*: Implementation of SNMC outstanding Conclusions/Decisions*

That:
Concerned SNMC member States/Organizations are urged to implement the outstanding Conclusions/Decisions of SNMC previous meetings including those related to SNMC/27's and the Recommendations of the SNMC Coordination meeting as presented in Appendices B and C to this report.

1.4   The meeting discussed the status of the promotion of the SNMC Webpage and the project of development of E-Learning and concluded on the necessity to establish a Task Force of Subject Matter Experts to carry out the Tasks assigned under the coordination of the Roberts FIR.

The following conclusion was formulated:

Conclusion 28/03*: Development, promotion of the SNMC Webpage and finalization of the E-Learning project*

That:

Under the coordination of the Roberts FIR, a Task Force of Subject Matter Experts selected amongst the JTE team listed in Appendix D, is established to develop the SNMC Webpage and to review the project document of E-learning for full implementation.
In this regard, the group will explore the way for E-learning partnership with the industry

Agenda Item 2:   **Review of AFISNET operational and technical statistics of availability**

2.1   Under this agenda item NAMA presented (**WP/03A)** AFTN and ATS/DS circuit availability of Comms Centres in NAMA. The meeting noted that on average,s some ATS/DS and AFTN circuits performed below the ICAO recommended level. The meeting also took note that the performance of the ATS/DS links was impacted by the transition from the Alcatel Satcom System to VSAT in August 2023. Additionally, the performance of the NAMA AFTN circuits was affected by a fire incident that damaged Satcom System equipment at Lagos in September 2023.

2.2   GCAA presented to the meeting (**WP/03B and WP/03B1**) the performance of AFTN and ATS/DS links. The meeting noted lower recorded percentages for ATS/DS and AFTN links between Accra and some of the neighbouring Com Centers (Kano, Lagos, Libreville) due to modem fault while challenges were experienced with LNB unit fault in other cases (Cotonou), multiplexer asynchronous port failure (Brazzaville) and new IP SATCOM network deployment (Luanda).

2.3   The Roberts FIR informed the meeting (**WP/03C**) on the status of availability of ATS/DS and AFTN and pointed out some faulty function in both ATS/DS and AFTN with Lungi and Dakar during year 2022 and for the period of 2023-2024.

2.4   ASECNA provided the meeting (**WP/03D**) with the statistics of availability for AMHS/AFTN and ATS/DS. The meeting noted deficiencies with the centers of Kano and Kinshasa while the link between N'Djamena and Khartoum is out of service

2.5   In view of the above the meeting urged concerned ANSPs to take appropriate action aimed at resolving in accordance with the agreed timeline, the outstanding deficiencies. The following conclusion was formulated:

Conclusion 28/04: *Resolution of AFISNET deficiencies*

That:
 In order to ensure an effective and timely restauration   of AFISNET outstanding and future deficiencies, concerned ANSPs take the appropriate actions aiming at resolving in accordance with the agreed timeline, the outstanding deficiencies as summarized at Appendix E and report to the current SNMC coordinator with copy to the Secretariat.

2.6   Looking for the root's causes of outstanding deficiencies the meeting agreed on the need to reinforce the collaboration between the maintenance personnel and the coordination during the scheduled interruption for maintenance or replacement of AFISNET components. The following conclusion was formulated:

Conclusion 28/05: Coordination *of maintenance operations*

That:
For better successful coordination of maintenance operations, SNMC members:

- c) **Endeavor to nominate maintenance subject matter expert focal points and yearly update their details to reinforce bilateral technical coordination.**
- d) **Develop when replacing equipment, a maintenance transit plan with an interruption time window, to be shared with concerned neighbors to minimize the impact of the process on circuits availability**

Agenda Item 3: Surveillance data Sharing through AFISNET

3.1   Under this agenda item the Secretariat presented to the meeting (**WP/04**) Surveillance data sharing operational requirements, principles, challenges and constraints, expected benefits as well as the regional initiatives. The meeting discussed in length the opportunity to continue the project initiated since 2016 and postponed with the COVID-19 Pandemic and agreed to relaunch the project. The meeting tasked a small group to review and update the surveillance data sharing roadmap. The revised Roadmap is presented in **Appendix F** to the report. The following decision was formulated:

Decision 28/06: Continuation *of the surveillance data sharing project*

That:

In order to ensure a continuous, reliable and robust seamless surveillance provision, the surveillance data sharing project is maintained for the integration of data emanating from ground-based surveillance sensors (SSR and ADS-B).
In this regard, the revised Roadmap for surveillance data sharing is adopted as attached in Appendix F

3.2   Furthermore, the meeting discussed the effective implementation of the project by leveraging the equipment already provided, the sole pending issue being the provision of adequate spectrum for the links.
In this regard, a Task Force was established for the implementation of the revised Roadmap for surveillance data sharing and ASECNA was tasked to keep the lead of the Task Force. The following Conclusion was formulated:

Conclusion 28/07: Implementation of the roadmap of surveillance data sharing

That:

Under the coordination of ASECNA, a Task Force as presented in Appendix G of this report, is established to conduct the task identified by the revised Roadmap for surveillance data sharing.
In this regard, and in accordance with the timeline set forth in the roadmap for the surveillance data sharing project:

   c) **SNMC members will provide in a timely manner ASECNA with their surveillance data sharing requirements for satellite spectrum but not later than 31/08/2024;**
   d) **ASECNA will convene a coordination meeting with INTELSAT during which ANSPs will, through a common principle, secure the bandwidth for the surveillance data sharing project.**

Agenda Item 4: Outcomes of APIRG 23rd, 24th, 25th, 26th Meetings with impact on SNMC activities and preparation of APIRG 27th meeting

4.1   Under this agenda item the Secretariat provided the meeting (**WP/05**) with a summary of the outcomes of APIRG 23rd, 24th, 25th, 26th Meetings with impact on SNMC activities and the preparation of APIRG 27th meeting to be held on November 2024. The meeting noted that AFISNET related topics are discussed in the APIRG IIM Projects, the IIM subgroup and the APIRG & RASG meetings.

4.2   APIRG Conclusions and Decisions adopted cover all ANS areas including AFISNET-related scope and some deliberations under ATM, AIM & MET may have an impact on AFISNET activities. The meeting agreed to align SNMC initiatives with the regional air navigation plan by considering the outcome of APIRG meetings in order to prevent duplication. The following conclusion was formulated:

Conclusion 28/08: Alignment of SNMC activities with the regional air navigation plan

That:
In order to avoid duplication and ensure the alignment of SNMC initiatives with the regional air navigation plan, AFISNET members in their planned activities, consider the relevant provision of the APIRG-RASG-AFI with impact on the network.

Agenda Item 5: Outcome of ITU World Radio Communication Conference 2023 (WRC-23) and Spectrum
                    issues
5.1   Under this agenda item, the Secretariat (**WP/06**) and ASECNA (**WP/06bis**) presented to the meeting the outcome of the ITU World Radio Communication Conference 2023 (WRC-23). The meeting was reminded

of the scope and the mechanisms of WRC as well as the development and promotion of ICAO Position on spectrum issues. The Finals Acts of WRC-23 were summarized with emphasis on the agenda item with impact on the operation of AFISNET.

5.2   In this regard, although the tremendous efforts deployed by the ICAO Team the Agenda Item 1.2 - Identification of the frequency bands **3 300-3 400 MHz, 3 600 3 800 MHz**, 6 425-7 025 MHz, 7 025-7 125 MHz and 10.0-10.5 GHz for International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis- came with adverse outcome: Primary allocation to 5G with the consequences of risk of severe interference on the band 3 300-3 400 MHz

5.3   In the same vein, Agendat Item 1.3-Primary allocation of the band 3 600-3 800 MHz to mobile service within region 1- resulted in an adverse outcome with the risk of severe interference on the band 3 600-3 800 MHz.

5.4   The meeting commended the work done by ICAO during the WRCs and urged AFISNET members to take the appropriate measures to protect the operation of AFISNET in line with Resolution 154 WRC-19 (Rev.) and ensure that in case of migration in an upper frequency band, the new allocation is secured for the safety of life service provision. The following conclusion was formulated:

Conclusion 28/09: Secured C-band spectrum for AFISNET

That:
In consideration of the adverse outcome of the ITU recent World Radiocommunication Conference 2023 that allocated the bandwidths 3 300-3 400 MHz & 3 600-3 800 MHz to the 5G   mobile service in a primary basis in region 1, AFISNET members take the appropriate measures to protect the operation of AFISNET in line with Resolution 154 WRC-19 (Rev.) and ensure that in case of migration in an upper frequency band, the new allocation is secured for the safety of life service provision.

5.5   The meeting furthermore discussed spectrum requirements regarding the satellite service provider and agreed on the need for a collective approach for spectrum from ANSPS.
In this regard, SNMC members were requested to identify their spectrum needs to be forwarded to ASECNA tasked to coordinate a concertation meeting of SNMC representatives with INTELSAT.
The following Conclusion was formulated:

Conclusion 28/10: Spectrum requirement for the operation of AFISNET

That:
To ensure a collective approach for spectrum requirements towards the satellite service provider:

c) **SNMC members provide ASECNA with, but not later than 30/09/2024, their spectrum requirements for circuits to support surveillance data sharing, AMHS interconnection and any other future service for transmission to INTELSAT**
d) **ASECNA coordinates a concertation of SNMC representatives meeting with INTELSAT to take place not later than 31/12/2024**

Agenda Item 6:   Re-engineering of AFISNET (Implementation of Special AFI/RAN meeting Recommendations 6/18)

6.1   Under this agenda item the Secretariat presented (**WP/07**) to the meeting a summary of the AFISNET re-engineering project. The meeting was recalled on the various steps taken since the launch of the internal assessment and the external Audit of AFISNET. The stumbling blocks identified were the COVID-19 Pandemic and mainly the lack of sustainable funding mechanism.

6.2   It was agreed to wake up the JTE sessions and review/update the technical specifications of AFISNET modernization taking into consideration the agreements met during the SNMC and APIRG meetings.
The JTE should come out with realistic proposals for the establishment of arrangements for the provision of an effective funding mechanism for the project. In this regard ANSPs were invited to update the list of their representatives that is attached at **Appendix D** to this report. The following conclusion was formulated:

<u>Conclusion 28/11</u>: **Update of the project for AFISNET Re-engineering and modernization**

That:

In the relaunch of AFISNET Re-engineering and modernization exercise, the SNMC Joint Technical Team (JTE) led by ASECNA is tasked to complete the following assignments not later than 31 August 2024:
   a) **Review and update the technical specifications and administrative documents of the project including the incorporation of new identified requirements aligned with the AFI regional Air Navigation Plan.**
   b) **Estimate the provisional cost of the project**
   c) **Identify possible funding mechanisms and potential sources of financial resources mobilization**

6.3   The meeting also noted the need for the SNMC Board to be more committed in providing the necessary resources for the modernization of the Network and proposed that a Board meeting be convened back-to-back with a SNMC extraordinary meeting for the effective kick off of the project. The following conclusion was formulated:

<u>Conclusion 28/12</u>: **Future SNMC meeting and SNMC Board coordination meeting**

That:

1. **NAMA and ASECNA coordinated for a SNMC extraordinary meeting for the adoption of the outcome of the JTE and Tasks Force established to carry on their assigned tasks**

2. **A Board meeting be convened back-to-back with the SNMC's to update the Board Members on:**
   a) **The challenges encountered by the network due to its obsolescence and the threat on operation disruption**
   b) **The maturity of the re-engineering and modernization project as well as the possible funding mechanisms and fund mobilization**
   c)

6.4   GCAA presented to the meeting (**WP/08**) a progress report on the migration to Netperformer as summarized in the table below.

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-COO	Re-established and operational.	Re-established and operational.	Re-established and operational.	Migrated to Netperformers. The links are operational and working satisfactorily.
ACC-BZV	Re-established.	Re-established.	Re-established.	Not migrated to Netperformers due to unavailability of DCE cable for AFTN connection.

The meeting commended this achievement and encouraged ANSPs who have not yet done so to take actions.

<u>Agenda Item 7</u>: Interconnection and interoperability of systems through AFISNET (AMHS, AIDC)

7.1   Under this agenda item, the meeting was provided by ASECNA (**WP/08A**) with information related to the status of implementation of the interconnexion of AFISNET with its neighboring networks as well as its extension beyond the AFI Region.

7.2   GCAA updated the meeting (**WP/08B**) on the progress made by Ghana towards the implementation of ATS Message Handling System (**AMHS**) and ATS Inter-Facility Data Communication (**AIDC**). GCAA confirmed to be in the process of operationalizing the existing AMHS system by interconnecting with other centers, in line with SNMC /27 Conclusion 27/04: *Upgrade of AFISNET Base Band Equipment* and Conclusion 27/05: *Implementation of AIDC*.
The status of interconnection of AIDc is summurisd in the tabl below.

AIDC interconnection links between Accra ACC and neibhoring ATSUs

ATS Units	Connection	Status of Implementation
Abidjan	Connected	Operational with LOAs
Lome	Connected	Operational with LOAs
Ouagadougou	Connected	Operational yet to sign LOA
Niamey	Connected	Operational yet to sign LOA

7.3   The meeting commended these achievement and encouraged ANSPs to pursue their efforts to enseure IP based connecting links and consider the mitigation of cyber- security risk for safe operation to support the provision of AIDC service through the AMHS links. The following conclusion was formulated:

Conclusion 28/13: Implementation of AMHS and AIDC

That:
   a) When reviewing the technical specifications for AFISNET Re-engineering and modernization the JTE consider the required transmission rate and therefore the spectrum required to support the successful implementation of IP connectivity on AFISNET to ensure the implementation of AMHS for the transmission of aeronautical digital services (MET, NOTAM, MAP…) and future System Wide Information Management (SWIM) services.

   b) Meanwhile, ANSPs are encouraged to continue the successful implementation of AIDC under the AFTN, for the benefit of the ATM operations, in accordance with the regional agreements set forth by APIRG.

Agenda Item 8:   Implementation of Aeronautical Mobile Service on AFISNET

8.1   Under this agenda item the Secretariat presented to the meeting (**WP/09**) a summary of Satellite based remote Radio VHF provision and recalled APIRG Decision 25/36 on the survey of Aeronautical Mobile Service (**AMS**) to be conducted by States.

8.2   Furthermore, the Secretariat reminded the meeting on the availability of the AFI Air Navigation Deficiencies Database (**AANDD**) through a consolidated reporting system that is made effective.

8.3   The meeting recognized the need for a continuous survey of Aeronautical Mobile Communication (**AMC**) with regular reporting on both satellite based remote VHF coverage status and deficiencies affecting the service provision. The following conclusion was formulated:

Conclusion 28/14: Inclusion of the survey on the availability of remote VHF in the scope of SNMC

That:

In line with APIRG Decision 25/36 on the survey of Aeronautical Mobile Service, SNMC members take the appropriate measures to conduct the evaluation of the availability of the remote VHF stations and report in the Afi Air Navigation Deficiency Database (AANDD)

Agenda Item 9: Evolutions in Satellite Communication Technology

9.1   Under this agenda item NIGCOMSAT the Nigerian Satellite Communication Provider briefed the meeting (**WP/10**) on its capability to provide satellite spectrum including the C-Band operated by AFISNET.

NIGCOMSAT also provided information on the joint project with SatNAv in trials for the provision of SBAS on the L band.

9.2   The meeting commended these efforts and discussed issues related to the continuous availability of satellite spectrum. In this regard, the JTE was tasked to duly consider the exploration for new experienced and reliable satellite spectrum providers to support a potential migration of AFISNET to be included in the technical specifications for AFISNET Re-engineering. The following conclusion was formulated:

Conclusion 28/15: Exploration of new satellite spectrum providers

That:
In the framework of AFISNET re-engineering and modernization, the JTE duly considers in its assigned tasks the exploration for new experienced and reliable satellite spectrum providers to support a potential migration of AFISNET to be included in the technical specifications

Agenda Item 10: Review of the Term of Reference and Work Programme of SNMC

10.1   Under this agenda item the meeting reviewed (**WP/11**) the Terms of Reference and Work Programme of SNMC together with the Form of agreement.

10.2   The revised Terms of reference attached in **Appendix H** to this report with the amendments highlighted were adopted by the meeting.

The following decision was formulated

Decision 28/16: Adoption of the Term of reference and Form of Agreement of SNMC

That:

The Term of Reference, Form of Agreement and Form of Agreement of SNMC are adopted as attached at Appendix H and may be further amended as necessary.

Agenda Item 11: Review of the Draft Conclusions/Decisions of SNMC/28

11.1   Under this agenda item, the meeting reviewed and amended, when necessary, the draft conclusions and decisions presented by the Secretariat (**WP/12**).

Agenda Item 12: Any other business

12.1   Under this agenda item the meeting discussed issues related to the necessity to comply with the deadlines agreed for the conduct of the various actions.
12.2   The meeting recalled the rotation process adopted for hosting SNMC meetings. In this regard **NAMA** is the member who will host the next SNM/28 meeting during the year 2024.The Secretariat was tasked to update the table as attached at **Appendix I** to this report.
12.3   It was reminded that the follow-up of the implementation of these Conclusions and Decisions will be under the responsibility of NAMA, the current SNMC coordinator, until the next SNMC 29 meeting to be hosted by the Roberts FIR.
12.4   The Secretariat will coordinate with the Roberts FIR for the planning, hosting and effective holding of SNMC 29.

Decision 28/17: Future yearly regular SNMC meetings

That:
The future yearly regular SNMC meetings are tentatively scheduled along the rotation principle as attached in Appendix I.
The Roberts' FIR will coordinate with the Secretariat for the 2025 meeting schedule.

*************** END ***************