

**INTERNATIONAL CIVIL AVIATION ORGANIZATION  
WESTERN AND CENTRAL AFRICAN OFFICE**



**TWENTY FIRST MEETING OF THE AFI SATELLITE NETWORK  
MANAGEMENT COMMITTEE (SNMC/21)**

**Conakry, Guinea, 16-20 December 2013**

**FINAL REPORT**



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## **PART I – HISTORY OF THE MEETING**

### **1. Introduction**

1.1 The Twenty-first Meeting of the AFI Satellite Network Management Committee (SNMC/21) was held at the **MARIADOR PALACE HOTEL** located at RATOMA, Conakry, Guinea from 16 to 20 December 2013 at the kind invitation of the **ROBERTS FLIGHT INFORMATION REGION** with the support of the Guinean Civil Aviation Authority.

1.2 The meeting was opened by **Elhadj Tidiane Traoré**, Honourable Minister in charge of Transport. He welcomed the participants and underlined the importance of satellite based communication for the reinforcement of Air Navigation safety in SNMC Member State's Airspace.

1.3 He noted that the work programme of SNMC 21<sup>st</sup> session was huge and drew the attention of the participants on the key agenda items the deliberation on which needed to be conducted with the spirit of collaboration and consensus.

He ensured the meeting on his commitment to bring any SNMC concern to the ministerial board of the Robert FIR and to the attention of his other colleagues in SNMC member States in order to provide the adequate desirable support to conduct the future work on the development of the network, bearing in mind the objective of a greater efficiency and cost effectiveness.

He expressed his confident to the ability of the participants to come out with tangible proposals for the improvement of the network and urged the SNMC to accelerate the network evaluation and re-engineering process in a transparent manner.

He wished the meeting successful deliberations and declared it opened.

### **2. Officer and Secretariat**

2.1 The meeting elected as Chairman, Mr. **Matho Nianga Gomou**, Head Engineering Department Roberts FIR.

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 prepared the working and information papers to be presented accordingly. He was assisted for the two first day by Mr **Romain Ekoto**, Regional Officer Technical Cooperation.

### **3. Attendance**

3.1 The meeting was attended by Thirty Seven (**37**) participants from three (03) States (The Gambia, Guinea, and Sierra Leone) five (**05**) Regional Air Navigation Service Providers (**ASECNA, ENNA, GCAA, NAMA, Roberts FIR**). One regional economic integration organization (**ECOWAS**) attended the meeting.

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 Conclusions and Decisions of SNMC/20**

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

**2.1 Statistics of availability of the links supported by AFISNET.**

**2.2 AFISNET performance (*Stations MTBF and MTTR performance, Turnaround time's statistics*)**

##### **Agenda Item 3: Implementation of Special AFIRAN meeting recommendations 6/18 and 6/19**

**3.1 Status of implementation of SP/AFI/RAN *Conclusion 6/18: AFISNET Technical Evaluation and re-engineering***

**3.2 Status of implementation of SP/AFI/RAN *Conclusion 6/19: Planning, implementation and operation of very small aperture terminal (VSAT) networks in the AFI Region***

##### **Agenda Item 4: Interconnection and interoperability of AFISNET with its neighboring networks (CAFSAT, NAFISAT, SADC2)**

##### **Agenda Item 5: Outcome of ITU WRC-12 pertaining to VSATs Networks and preparation of WRC-15**

##### **Agenda Item 6: Satellite backup and AFISNET band width re-engineering;**

##### **Agenda Item 7: Review of the Resolutions of ICAO 38<sup>th</sup> Assembly and the Conclusions of APIRG/19 related to AFISNET**

##### **Agenda Item 8: Required Communication Performance of AMS supported by AFISNET**

##### **Agenda Item 9: Review of the Term of reference and Work Programme of SNMC**

##### **Agenda Item 10: Review of the Draft Conclusions/Decisions of SNMC/21**

##### **Agenda Item 11: Any other business**

## 6. Summary of Conclusions

### **Agenda Item 1: Follow up Conclusions and Decisions of SNMC/20**

#### **Conclusion 21/01: Implementation of SNMC/20 outstanding conclusions and Decisions**

That:

Concerned SNMC member States/Organizations are urged to implement the outstanding Conclusions/Decisions of SNMC previous meetings including those related to SNMC/20's as presented in **Appendix B** to this report.

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

#### **Conclusion 21/02: Restoration of the availability of failing circuits and implementation of new bilateral AFS circuits**

That:

- a) SNMC concerned member States/Organizations undertake corrective actions in order to restore and stabilize as required, the reliability and availability of the AFS circuits as summarized in **Appendix C**;
- b) ASECNA and Roberts FIR initiate and conduct bilateral consultations in order to implement by the **end of March 2014**, the following bilateral circuits:

Roberts /Bamako: ATS/DS;

Roberts/Abidjan: AFTN.

#### **Decision 21/03: Finalization of the Common training Manual for AFISNET maintenance personnel and inclusion into the Audit exercise**

That:

- a) In the framework of the mandate of the Task Force established by SNMC/20, States/Organizations endeavor to provide no later than **end of March 2014**, GCAA with their latest additional comments on the draft Common Training Manual for AFISNET maintenance personnel.
- b) GCAA finalize by **end of April 2014**, the Manual and forward it to the Secretariat for inclusion into the AFISNET external audit exercise for advice.

#### **Conclusion 21/04: Implementation of training plans for AFISNET Maintenance personnel**

That:

In the framework of the implementing of the training plans for AFISNET Maintenance personnel;

- a) States/Organizations consider the training capability existing in the Region to develop partnership with the industry (Satellite providers, Base band facilities manufacturers) and the sub-regional economic integration organizations (ECOWAS, ECAS, UEMOA, CEMAC ....) in order to take benefit of possible integrated training projects funding;
- b) ICAO in collaboration with AFCAC continue his assistance on training planning and implementation.

#### **Conclusion 21/05: Establishment of Licenses for AFISNET Maintenance Personnel**

That:

- a) SNMC States/Organizations, who have not done so, expedite the study for a possible issuance of licenses to AFISNET Maintenance personnel as part of Human Resource capacity building in the framework of the implementation of the Safety Management System (SMS).
- b) ICAO include this requirement in the updated Terms of reference of AFISNET external Audit exercise

#### **Decision 21/06: Development of a calibration center for AFISNET Test Equipment**

That:

In accordance with Decisions 18/02 of SNMC/18, 19/04 of SNMC/19 and Decision 20/05 of SNMC/20 meetings;

- a) SNMC member States/Organizations explore possible additional candidates for the calibration of test equipment similar to those used for AFISNET and forward **no later than end of January 2014** their exhaustive expanded list of test equipment;
- b) Based on the additional data received, ASECNA pursue its effort in the development of the study for the implementation of the regional calibration center and circulate by **end of March 2014** a draft document on it feasibility for consideration by the joint Technical Team for AFISNET Evaluation and reengineering and possible inclusion in the external audit exercise;
- c) ICAO continue its assistance to the planning and implementation process.

#### **Agenda Item 3: Implementation of Special AFIRAN meeting recommendations 6/18 and 6/19**

##### **3.1 Status of implementation of SP/AFI/RAN Recommendation 6/18: AFISNET Technical Evaluation and re-engineering**

#### **Decision 21/07: Update/Confirmation of States Representatives in the AFISNET Joint Technical Evaluation and re-engineering Team**

That:

SNMC core member States/organizations;



- a) Update/confirm by forwarding to the Secretariat no later than end of **February 2014**, the name, qualification and detailed contacts of their nominees to participate in the oversight of AFISNET external Audit;
- b) Provide as a matter of urgency any additional requirement to be included in the future revised Terms of reference of the Audit of AFISNET.

### **Conclusion 21/08: Evaluation of the applicants for AFISNET external Audit**

That:

In consideration of the Term of reference for AFISNET external evaluation, the proficiency of most of the applicants presented by ICAO TCB does not comply with the requirements of the Audit exercise.

### **Decision 21/09: Revision of AFISNET Technical Evaluation and re-engineering process**

That:

In consideration of the result of the call for application of individual experts to participate in AFISNET evaluation and reengineering ICAO;

- a) Review as a matter of urgency the formula to conduct the Audit with preference to committing consultancy companies with consolidated telecommunication expertise (Expertise in Satellite Communication techniques and infrastructures, Local and Wide Area Networks hardware and software, Maintenance organization, management and Personnel training, ...) instead of individual experts.  
The chosen company should be responsible for the coordination of its team on and off site activities and accountable of the Audit Results and AFISNET member/staff should not be authorized to be candidate to the external audit team.
- b) Extend as wide as possible the publication of the call for application in appropriate webpages in order to ensure a good pace of participation of such companies;
- c) Finalize a new planning to be completed preferably before the **end of the second quarter of year 2014** and conduct the project in the framework of the current allocated budget without any additional cost.

### **3.2 Status of implementation of SP/AFI/RAN Conclusion 6/19: Planning, implementation and operation of very small aperture terminal (VSAT) networks in the AFI Region**

#### **Agenda Item 4: Interconnection and interoperability of AFISNET with its neighboring networks (CAFSAT, NAFISAT, SADC2)**

### **Conclusion 21/10: Completion of the interconnection process between AFISNET and its neighboring networks**

That:

- a) Concerned States/Organizations pursue their efforts to complete the interconnection between AFISNET and its neighboring networks in order to implement the required AFS circuits for ATM operation as summarized in **Appendix D**.
- b) ICAO continue to assist the concerned stakeholders with guidance and technical coordination meetings aiming to meeting agreement on cost effectiveness solutions for the implementation of the interconnection.

**Agenda Item 5: Outcome of ITU WRC-12 pertaining to VSATs Networks and preparation of WRC-15**

**Conclusion 21/11: Implementation of Resolution 154 (COM 6/24)- WRC-12 and preparation of WRC-15**

That:

- a) SNMC Sates/Organizations endeavor to:
  - 1) Continuously sensitize their CAAs on the issues related to ITU *Resolution 154 (COM 6/24)- WRC-12* calling upon for “possible technical and regulatory measures in some countries in Region 1 to support the existing and future FSS earth stations in the 3 400-4 200 MHz band used for satellite communications related to safe operation of aircraft and reliable distribution of meteorological information” ;
  - 2) Strengthen partnership with stakeholders involved in aeronautical spectrum operation (Communication Service providers, Airline, Airport operators....)
  - 3) Ensure involvement in the National preparatory activities for WRC-15 and in the Conference;
- b) ICAO pursue assistance in line with the outcome of the 12<sup>th</sup> Air Navigation Conference and the ICAO 38<sup>th</sup> Assembly through the activities of the ITU Working Parties.

**Decision 21/12: Establishment of the AFI Users of Satellite for Civil Aviation (AUSCA)**

That:

States/Organizations actively support the AFI Frequency Management Rapporteur in his coordination activities aiming to establishing the *AFI Users of Satellite for Civil Aviation (AUSCA)* as a forum of stakeholders (Industry, Regional and sub-regional institutions...) interest in the protection of the C-Band operated by VSAT networks.

**Agenda Item 6: Satellite back up and AFISNET band width re-engineering;**

**Conclusion 21/13: Satellite back up**

That:

As a matter of urgency:

- a) SNMC States/Organizations provide to ASECNA materials for the completion of the development of a customer requirements to be submitted to the satellite Service Provider INTELSAT that will address the feasibility of technical solutions to be deployed in case of satellite failure and;
- b) NAMA develop a satellite failure reporting template for consideration by the Joint Technical Team and inclusion in the external Audit document for advice;
- c) ICAO coordinates a meeting of SNMC members with the satellite Service Provider INTELSAT in order to investigate the satellite shortage that occurred on **13 November 2013** and explore the best way to prevent/mitigate such a major service outage.

**Decision 21/14: AFISNET bandwidth re-engineering**

That:

The conversion of IBS unused carriers to leased band with INTELSAT be undertaken based on the status of unused carriers to be finalized by ASECNA **by 31 of December 2013**.

**Agenda Item 7: Review of the Resolutions of ICAO 38<sup>th</sup> Assembly and the Conclusions of APIRG/19<sup>th</sup> related to AFISNET**

**Conclusion 21/15: Alignment of SNMC activities with the AFI Regional Air Navigation Plan**

That:

States/Organization when addressing the SNMC Work Programme and Future activities;

- a) Consider the AFI Regional Air Navigation Plan aligned with the ICAO new Global Air Navigation Plan (**GANP Doc.9750**);
- b) Take into account the Technologies Roadmaps guiding the implementation of the Modules defined in the framework of the Aviation Systems Blocks Upgrades (ASBU) methodology;
- c) Implement their programme based on the priorities defined by APIRG/19<sup>th</sup> meeting.

**Agenda Item 8: Required Communication Performance of AMS supported by AFISNET**

**Agenda Item 9: Review of the Term of reference and Work Programme of SNMC**

**Decision 21/16: Term of reference and Work Programme of SNMC**

That:

The revised Terms of Reference of SNMC is adopted as presented at **Appendix E**.

**Agenda Item 10: Review of the Draft Conclusions/Decisions of SNMC/21****Agenda Item 11: Any other business****Conclusion 21/17: Development of an SNMC Webpage**

That:

In order to improve communication and information sharing:

- a) GCAA initiate by **end of July 2014** a draft secured SNMC Webpage for consideration by SNMC via electronic messaging;
- b) Member States/Organizations participate in the development of this Webpage.

**PART II: REPORT ON AGENDA ITEMS****Agenda Item 1: Follow up Conclusions and Decisions of SNMC/20**

1.1 Under this agenda item the meeting reviewed the status of implementation of fifteen (15) Conclusions and six (06) Decisions of the SNMC /20 meeting held in November 2012 in Abuja (Nigeria).

1.2 It was noted that some conclusions have been partially implemented while others need to be implemented. The status of implementation of SNMC/20 conclusions/decisions is presented in **Appendix B**. The following conclusion was formulated:

**Conclusion 21/01: Implementation of SNMC/20 outstanding conclusions and Decisions**

That:

Concerned SNMC member States/Organizations are urged to implement the outstanding Conclusions/Decisions of SNMC previous meetings including those related to SNMC/20's as presented in **Appendix B** to this report.

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

2.1 Under this agenda item the meeting examined the technical and operational statistics of availability of AFISNET links and circuits presented by Ghana and ASECNA based on the four levels principle and procedure. It was suggested that a column should be added in order to show the progress accomplished from one year to the following.

2.2 The meeting was also updated on the remedial actions undertaken by concerned SNMC members to clear out the deficiencies noted during the assessment made by SNMC/20. The meeting recognized the improvement of availability of some circuits.

2.3 Based on the results of the statistics collected during year 2013 the meeting expressed its concerns on some remaining deficiencies as presented in **Appendix C**.

2.4 The meeting also expressed the need for the establishment of new additional Aeronautical Fixed Service circuits between Robert and Bamako (ATS/DS) Roberts and Abidjan (AFTN) in order to comply with the requirement resulting from the airspace organization and the traffic coordination constraints.

The following conclusion was formulated:

**Conclusion 21/02: Restoration of the availability of failing circuits and implementation of new bilateral AFS circuits**

That:

- a) SNMC concerned member States/Organizations undertake corrective actions in order to restore and stabilize as required, the reliability and availability of the AFS circuits as summarized in **Appendix C**;
- b) ASECNA and Roberts FIR initiate and conduct bilateral consultations in order to implement by the **end of March 2014**, the following bilateral circuits:

Roberts /Bamako: ATS/DS;

Roberts/Abidjan: AFTN.

2.5 The meeting examined the status of implementation of Decision 20/02 of the SNMC/20<sup>th</sup> meeting presented by Ghana tasked to coordinate the work of the Task Force on drafting a Training Programme for AFISNET maintenance personnel. The meeting noted the progress made by Ghana in the development of the Training Programme which was adapted into the ACT 678 of Ghana Civil Aviation Authority regulations which was enacted by Ghana parliament.

2.6 The meeting invited SNMC members to provide their additional comments on the document to Ghana for finalization.

The following Decision was formulated:

**Decision 21/03: Finalization of the Common training Manual for AFISNET maintenance personnel and inclusion into the Audit exercise**

That:

- a) In the framework of the mandate of the Task Force established by SNMC/20, States/Organizations endeavor to provide no later than **end of March 2014**, GCAA with their latest additional comments on the draft Common Training Manual for AFISNET maintenance personnel;

- b) GCAA finalize by **end of April 2014**, the Manual and forward it to the Secretariat for inclusion into the AFISNET external audit exercise for advice.

2.7 The meeting assessed the status of development and implementation of training plans by organizations and noted the progress accomplished.

2.8 The meeting encouraged States/Organizations to consider the training capability existing in the Region to develop partnership with the industry (Satellite providers, Base band facilities manufacturers) and the sub-regional economic integration organizations (ECOWAS, ECAS, UEMOA, CEMAC ....) in order to take benefit of possible integrated training projects funding.

The following conclusion was formulated:

**Conclusion 21/04: Implementation of training plans for AFISNET Maintenance personnel**

That:

In the framework of the implementing of the training plans for AFISNET Maintenance personnel;

- a) States/Organizations consider the training capability existing in the Region to develop partnership with the industry (Satellite providers, Base band facilities manufacturers) and the sub-regional economic integration organizations (ECOWAS, ECAS, UEMOA, CEMAC ....) in order to take benefit of possible integrated training projects funding;
- b) ICAO in collaboration with AFCAC continue his assistance on training planning and implementation.

2.9 The meeting discussed the issue related to the establishment of licenses for maintenance personnel and noted that NAMA (Nigeria) has made progress in this area while GCAA (Ghana) is studying the best way to issue these licenses.

The meeting encouraged States and Organizations to expedite the study for a possible issuance of licenses to AFISNET Maintenance personnel as part of Human Resource capacity building in the framework of the implementation of the Safety Management System (SMS).

The following conclusion was formulated:

**Conclusion 21/05: Establishment of Licenses for AFISNET Maintenance Personnel**

That:

- a) SNMC States/Organizations, who have not done so, expedite the study for a possible issuance of licenses to AFISNET Maintenance personnel as part of Human Resource capacity building in the framework of the implementation of the Safety Management System (SMS).
- b) ICAO include this requirement in the updated Terms of reference of AFISNET external Audit exercise

2.10 The meeting examined the status of development of a regional calibration center for AFISNET Test equipment as initiated by ASECNA.

ASECNA summarized up the actions undertaken in the framework of the ongoing study being conducted for the development of the center;

2.11 It appeared that the list of equipment provided by States/Organization was limited to satellite earth station base band test equipment so that this list seemed to do not be consistent to justify investment for the development of the calibration center. It was therefore agreed that the study should include additional test equipment for all CNS/ATM/MET facilities.

2.12 The meeting also invited States/Organizations to explore the ways to find potential additional candidates for the calibration of test equipment similar to those used for AFISNET.

The following decision was formulated:

#### **Decision 21/06: Development of a calibration center for AFISNET Test Equipment**

That:

In accordance with Decisions 18/02 of SNMC/18, 19/04 of SNMC/19 and Decision 20/05 of SNMC/20 meetings;

- a) SNMC member States/Organizations explore possible additional candidates for the calibration of test equipment similar to those used for AFISNET and forward **no later than end of January 2014** their exhaustive expanded list of test equipment;
- b) Based on the additional data received, ASECNA pursue its effort in the development of the study for the implementation of the regional calibration center and circulate by **end of March 2014** a draft document on its feasibility for consideration by the joint Technical Team for AFISNET Evaluation and reengineering and possible inclusion in the external audit exercise;
- c) ICAO continue its assistance to the planning and implementation process.

**Agenda Item 3: Implementation of Special AFIRAN meeting recommendations 6/18 and 6/19**

**3.1 Status of implementation of SP/AFI/RAN Recommendation 6/18: AFISNET Technical Evaluation and re-engineering**

3.1.1 Under this agenda item the meeting discussed the status of implementation of SP/AFI/RAN Recommendation 6/18 calling upon States/Organizations for AFISNET Technical Evaluation and re-engineering.

3.1.2 The Secretariat presented the current list of representatives appointed by States/Organizations since year 2011 to participate in the external Audit of AFISNET.

3.1.3 The meeting noted that changes might have been made which need that Organizations update or confirm the name, qualification and detailed contacts of their nominees to participate in the oversight of AFISNET external Audit.

The following decision was formulated:

**Decision 21/07: Update/Confirmation of States Representatives in the AFISNET Joint Technical Evaluation and re-engineering Team**

That:

SNMC core member States/organizations;

- a) Update/confirm by forwarding to the Secretariat no later than end of **February 2014**, the name, qualification and detailed contacts of their nominees to participate in the oversight of AFISNET external Audit;
- b) Provide as a matter of urgency any additional requirement to be included in the future revised Terms of reference of the Audit of AFISNET.

3.1.4 In line with SNMC previous deliberations calling for full transparency in the external audit mechanism, the meeting was presented the list of applicants submitted by the Secretariat. A technical commission was set up by the meeting to assess the relevance of the applicants profile and competence with regards to the Terms of Reference of the Audit as developed and agreed by SNMC.

3.1.5 It appeared that in consideration of the Term of reference for AFISNET external evaluation, the proficiency of most of the applicants presented by ICAO TCB does not comply with the requirements of the Audit exercise.

The following conclusion was formulated:

**Conclusion 21/08: Evaluation of the applicants for AFISNET external Audit**

That:



In consideration of the Term of reference for AFISNET external evaluation, the proficiency of most of the applicants presented by ICAO TCB does not comply with the requirements of the Audit exercise.

3.1.6 The meeting considered the unsuccessful results of the call for application of individual experts to participate in AFISNET evaluation and reiterate the need for the Audit to be expedite in a timely manner as organizations are awaiting for it outcome in order to develop their investment plan.

3.1.7 The meeting decided to urge ICAO (TCB) to review the formula to conduct the audit with preference to committing consultancy companies with consolidated telecommunication expertise instead of individual experts and extend as wide as possible the publication of the call for application in appropriate webpages in order to ensure a good pace of participation of such companies.

The following Decision was formulated:

**Decision 21/09: Revision of AFISNET Technical Evaluation and re-engineering process**

That:

In consideration of the result of the call for application of individual experts to participate in AFISNET evaluation and reengineering, ICAO:

- a) Review as a matter of urgency the formula to conduct the Audit with preference to committing consultancy companies with consolidated telecommunication expertise (Expertise in Satellite Communication techniques and infrastructures, Local and Wide Area Networks hardware and software, Maintenance organization, management and Personnel training, ...) instead of individual experts;
- b) The chosen company should be responsible for the coordination of its team on and off site activities and accountable of the Audit Results and AFISNET member/staff should not be authorized to be candidate to the external audit team;
- c) Extend as wide as possible the publication of the call for application in appropriate webpages in order to ensure a good pace of participation of such companies;
- d) Finalize a new planning to be completed preferably before the **end of the second quarter of year 2014** and conduct the project in the framework of the current allocated budget without any additional cost.

**3.2 Status of implementation of SP/AFI/RAN Recommendation 6/19: Planning, implementation and operation of very small aperture terminal (VSAT) networks in the AFI Region**

3.2.1 Under this agenda item the meeting noted that SP/AFI/RAN Recommendation 6/19 (*Planning, implementation and operation of very small aperture terminal (VSAT) networks in the AFI Region*) was being implemented through the work undertaken by the on the AFI Integrated Regional Telecommunication Infrastructure Task Force (IRTI/TF/1).

3.2.2 The outcome of the activities of the Task was reported to AFI CNS Sub Group (CNS/SG/5) and to APIRG/19 meetings

**Agenda Item 4: Interconnection and interoperability of AFISNET with its neighboring networks (CAFSAT, NAFISAT, SADC2)**

4.1 Under this agenda item the meeting reviewed the status of interconnection and interoperability of AFISNET with its neighboring networks (CAFSAT, SDC2 and NAFISAT) and noted the progress made.

4.2 Concerned States/Organizations were encouraged to undertake the coordination actions with the neighboring involved networks in order to establish the new links required for the safe and efficient provision of air navigation service as presented in **Appendix D**. The following conclusion was formulated:

**Conclusion 21/10: Completion of the interconnection process between AFISNET and its neighboring networks**

That:

- a) Concerned States/Organizations pursue their efforts to complete the interconnection between AFISNET and its neighboring networks in order to implement the required AFS circuits for ATM operation as summarized in **Appendix D**.
- c) ICAO continue to assist the concerned stakeholders with guidance and technical coordination meetings aiming to meeting agreement on cost effectiveness solutions for the implementation of the interconnection.

**Agenda Item 5: Outcome of ITU WRC-12 pertaining to VSATs Networks and preparation of WRC-15**

5.1 The meeting was provided with the summary of the work conducted by ICAO in collaboration with the AFI Frequency Management Rapporteur on the outcome of ITU WRC-12 pertaining to VSATs Networks and the preparation of ITU WRC-15.

5.2 The Secretariat and the rapporteur of AFI/FMG reminded to the attention of the meeting ITU Resolution 154 WRC-12 calling upon ITU Radiocommunication Bureau to conduct studies for possible technical and regulatory measures in some countries in Region 1 to support the existing and future FSS earth stations in the 3 400-4 200 MHz band used for satellite communications related to safe operation of aircraft and reliable distribution of meteorological information.

5.3 States/Organizations were invited to strengthen partnership with stakeholders involved in aeronautical spectrum operation and take commitment to ensure their involvement in the activities in preparation to WRC 15 by their national Authority of Regulation of Telecommunication.

The following conclusion was formulated:

**Conclusion 21/11: Implementation of Resolution 154 (COM 6/24) - WRC-12 and preparation of WRC-15**

That:

- 1) SNMC States/Organizations endeavor to:
  - a) Continuously sensitize their CAAs on the issues related to ITU *Resolution 154 (COM 6/24)- WRC-12* calling upon for “possible technical and regulatory measures in some countries in Region 1 to support the existing and future FSS earth stations in the 3 400-4 200 MHz band used for satellite communications related to safe operation of aircraft and reliable distribution of meteorological information” ;
  - b) Strengthen partnership with stakeholders involved in aeronautical spectrum operation (Communication Service providers, Airline, Airport operators....);
  - c) Ensure their involvement in the national preparatory activities for WRC-15 and in the Conference;
- 2) ICAO pursue assistance in line with the outcome of the 12<sup>th</sup> Air Navigation Conference and the ICAO 38<sup>th</sup> Assembly through the activities of the ITU Working Parties.

5.4 The meeting was informed on the outcome of the **CNS/SG/5** meeting held in Nairobi, Kenya from 16 to 19 September 2013 in preparation to APIRG/19. This meeting endorsed the conclusions/decisions of the third meeting of the AFI Frequency Management Group (**AFI/FMG/3**) held in Nairobi Kenya from 22 to 24 July 2013.

5.5 AFI/FMG/3 revised its Term of Reference and work programme to include activities in the framework of an **AFI Users of Satellite for Civil Aviation (AUSCA)** as a forum of stakeholders involved in the protection of the C-Band operated by VSAT networks.

5.6 The idea on this forum was proposed by the side meeting between AFI CAAs, ANSPs and the satellite industry during the ATU first preparatory meeting for WRC 15 held in Dakar on February 2013.

5.7 States/Organizations were strongly encouraged to support the establishment of this forum which may bring the satellite C-Band vendors and consumers to a common view on the challenges and stakes related to the band as it will be discussed under **Agenda item 9.1.5** of WRC 15.

The following decision was formulated:

Decision 21/12: Establishment of the AFI Users of Satellite for Civil Aviation (AUSCA)

That:

States/Organizations actively support the AFI Frequency Management Rapporteur in his coordination activities aiming to establishing the *AFI Users of Satellite for Civil Aviation (AUSCA)* as a forum of stakeholders (Industry, Regional and sub-regional institutions...) interest in the protection of the C-Band operated by VSAT networks.

**Agenda Item 6: Satellite back up and AFISNET band width re-engineering;**

6.1 Under this agenda item the meeting discussed the issue related to the need for satellite backup in order to ensure the continuity of service provided by AFISNET.

6.2 It was reported with high concerns a satellite service shortage which occurred on **13 November 2013 from 12h30 to 14 h TU** resulting in a total disruption of VSAT based communication during the said period. The meeting noted that such failure may not comply with requirements for the safety of life of air ground communication as well as for ground/ground time sensitive communication.

6.3 ASECNA reported to be awaiting to be provided with materials for the completion of the development of a customer requirements to be submitted to the satellite Service Provider INTELSAT that will address the feasibility of technical solutions to be deployed in case of satellite failure.

6.4 The meeting also noted the necessity to report on satellite shortage in a harmonized manner in order to facilitate the monitoring by the provider and tasked NAMA to develop a template in this regard.

The following conclusion was formulated:

**Conclusion 21/13: Satellite back up**

That:

As a matter of urgency:

- a) SNMC Sates/Organizations provide to ASECNA materials for the completion of the development of a customer requirements to be submitted to the satellite Service Provider INTELSAT that will address the feasibility of technical solutions to be deployed in case of satellite failure and;
- b) NAMA develop a satellite failure reporting template for consideration by the Joint Technical Team and inclusion in the external Audit document for advice;
- c) ICAO coordinate a meeting of SNMC members with the satellite Service Provider INTELSAT in order to investigate the satellite shortage that occurred on **13 November 2013** and explore the best way to prevent/mitigate such a major service outage.

6.5 The meeting discussed the pending issue related to the conversion of the unused IBS carriers re-engineering of AFISNET bandwidth. ASECNA tasked to do so was requested to expedite the finalization of the conversion of the unused carriers by end of year 2013.

The following decision was formulated:

**Decision 21/14: AFISNET bandwidth re-engineering**

That:

The conversion of IBS unused carriers to leased band with INTELSAT be undertaken based on the status of unused carriers to be finalized by ASECNA by 31 of December 2013.

**Agenda Item 7: Review of the Resolutions of ICAO 38<sup>th</sup> Assembly and the Conclusions of APIRG/19<sup>th</sup> related to AFISNET**

7.1 The meeting was provided with the Resolutions of ICAO 38<sup>th</sup> Assembly related to AFISNET.

7.2 The meeting encouraged SNMC member States/Organizations to implement ICAO 38<sup>th</sup> Assembly Resolutions in particular Resolution A-38-2 & A-38-6 related respectively to the Global Air Navigation Plan (GANP) and ICAO policy on radio frequency spectrum matters.

7.3 Therefore SNMC members States/Organizations were urged to increase their participation to related forthcoming meetings organized by ICAO, ITU, ATU, States and Organizations involved.

The following conclusion was formulated:

**Conclusion 21/15: Alignment of SNMC activities with the AFI Regional Air Navigation Plan**

That:

States/Organization when addressing the SNMC Work Programme and Future activities;

- a) Consider the AFI Regional Air Navigation Plan aligned with the ICAO new Global Air Navigation Plan (GANP Doc.9750);
- b) Take into account the Technologies Roadmaps guiding the implementation of the Modules defined in the framework of the Aviation Systems Blocks Upgrades (ASBU) methodology;
- c) Implement their programme based on the priorities defined by APIRG/19<sup>th</sup> meeting.

**Agenda Item 8: Required Communication Performance of AMS supported by AFISNET**

8.1 Under this agenda item the meeting was provided with a briefing on the Required Communication Performance (**RCP Doc. 9869: Manual on RCP**) concept and its impact on the availability requirements of AFISNET components providing Aeronautical Mobile Service (Satellite based remote VHF networks).

8.2 It was agreed that the choice of RCP type to be provided by AFISNET should be based on the operational requirements so that a strong coordination with the ATM community was to be undertaken prior to implementing RCP.

### **Agenda Item 9: Review of the Term of reference and Work Programme of SNMC**

9.1 Under this agenda item the meeting reviewed the Terms of reference and Work Programme of SNMC.

9.2 The meeting clarified the status of core member and observer and accordingly revised the list of observers and international organizations in respect to this clarification. The following decision was formulated:

#### **Decision 21/16: Term of reference and Work Programme of SNMC**

That:

The revised Terms of Reference of SNMC is adopted as presented at **Appendix E**.

### **Agenda Item 10: Review of the Draft Conclusions/Decisions of SNMC/21**

10.1 Under this agenda item the meeting reviewed and approved the draft conclusions/decisions presented by the Secretariat.

### **Agenda Item 11: Any other business**

#### **11.1 Information Sharing**

11.1.1 The meeting noted difficulties encountered by the Secretariat and the successive yearly coordinators to follow up the status of implementation of SNMC conclusions/decisions.

11.1.2 It was noted the necessity to improve communication and information sharing and member States/Organizations were encouraged to participate in the development of a SNMC Webpage to be initiated by GCAA.

The following Conclusion was formulated:

#### **Conclusion 21/17: Development of an SNMC Webpage**

That:

In order to improve communication and information sharing;

- a) GCAA initiate by end of July 2014 a draft secured SNMC Webpage for consideration by SNMC via electronic messaging
- b) Member States/Organizations participate in the development of this Webpage.

#### **11.2 Upcoming events**

11.2.1 Under this agenda item the secretariat briefed the meeting on the upcoming mayor events (ITU WRC 2015; Special APIRG/20 meeting, tentative meetings by Regional Offices to be held...) and encouraged members to participate in the preparation and the holding of these meetings.

### **11.3 SNMC Next Meeting**

11.3.1 Since its inception, SNMC meetings were hosted by core States/Organizations successively without any formal schedule. In view of the continuous development of its work programme, SNMC meetings are held on a rotation basis. Therefore since SNMC/18 the schedule of future meetings is updated to cover the next six (06) years period as presented in **Appendix F**.

11.3.2 Based on SNMC will welcomed an offer from ASECNA to host the next SNMC/22 meeting.

The secretariat will coordinate with ASECNA on the precise venue and dates, and SNMC members will be notified in due course.

### **11.4 Gratitude of the participants to Roberts FIR and Guinea Aviation Authorities**

The meeting expressed its gratitude to Roberts FIR and Guinea Civil Aviation Authority and in particular to **Elhadj Tidiane Traoré**, Honourable Minister in charge of Transport of Guinea for the assistance and the arrangement undertaken to facilitate the entry and safe stay of the delegates in Guinea as well as the facilities deployed during the meeting.

## APPENDIX A

**Twenty-first Meeting of the AFI Satellite Network Management Committee (SNMC/21)  
(Conakry, Guinea, 16-20 December 2013)**

**List of Participants/Liste des Participants**

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## Appendix B

Twenty First meeting of the AFI Satellite Network Management Committee (SNMC/21)  
(Conakry, Guinea, 16–20 December 2013)

### Status of Implementation of the Conclusions of SNMC/ 21 Meeting

<u>Agenda Item 1: Follow up on SNMC/19 Conclusions</u>				
Conclusions/Decision	Text	Organization	Status of implementation	Comments
Conclusion 20/01	<i>Implementation of SNMC/19 outstanding conclusions SNMC</i>			
	<p><b>That:</b></p> <p>SNMC member States/Organizations are urged to implement the outstanding Conclusions/Decisions of SNMC previous meetings including those related to SNMC/19's as presented in <b>Appendix B</b> and to undertake corrective actions in order to:</p> <ul style="list-style-type: none"> <li>a) Restore and stabilize the AFISNET operational/technical reliability and availability as required;</li> <li>b) Provide adequate resources to ensure maintenance personnel exchange and training;</li> <li>c) Improve the maintenance coordination and monitoring procedures by bilateral and multilateral maintenance personnel exchange</li> </ul>	All Organizations	Concerned Organizations to report	
Decision 20/02	<i>Finalization of the common training programme for AFISNET maintenance personnel</i>			
	<b>That:</b>	GCAA	GCAA to report	

	<p>a) A Task Force is established to finalize <b>not later than end of July 2013</b>, the draft training programme developed by Ghana for AFISNET maintenance personnel based on the common facilities and the provision of ICAO Training Manual for Air Traffic Safety Electronics Personnel (ATSEP), Doc 7192-AN/857 Part E-2.</p> <p>b) Ghana coordinate the work of the Task Force and report for circulation and consolidation among SNMC members with copy to ICAO WACAF Regional Office.</p>			
Conclusion 20/03	<i>Development of training plans for Maintenance personnel</i>			
	<p><b>That:</b></p> <p>SNMC States/Organizations develop and implement short, medium and long term training plans for maintenance personnel taking into consideration the provision of the common training programme and the training capability existing in the Region; The status of implementation of the short term training will be reported to next SNMC 2th meeting.</p>	All Organizations	States to report	
Conclusion 20/04	<i>Licenses for AFISNET Maintenance Personnel</i>			
	<p><b>That:</b></p> <p>SNMC Sates/Organizations undertake a harmonized study for a</p>	All Organizations	States to report	

	<p>possible issuance of licenses to AFISNET Maintenance Personnel based on the successful implementation of the training programme and plans and subsequently ensure attractive position and conditions with regard to the responsibility and accountability required from the licensed personnel.</p>			
Decision 20/05	<p><i>Development of a calibration center for AFISNET Test Equipments</i></p> <p><b>That:</b></p> <p>In accordance with Decisions 18/02 of SNMC/18 and 19/04 of SNMC/19</p> <p>a) ASECNA tasked as Team leader by SNMC/19 pursue its effort in the development of the study for the implementation of the regional calibration center called upon by SNMC /18 and 19 meetings;</p> <p>b) SNMC members that have not done so, provide/complete an exhaustive list of tests equipments for the development of a data base and the finalization of the feasibility studies by <b>end of January 2013</b> and;</p> <p>c) ICAO continue to support the implementation process;</p>	<p>ASECNA</p> <p>Sates</p> <p>ICAO</p>	<p>Organizations to report</p> <p>ICAO coordinated the collection of the list of</p>	<p>At the request of ASECNA ICAO purchase ISO/CEI/17025:2005 Document tests equipments and received data from Roberts FIR, GCAA</p> <p>This document contains the requirements for the capability of</p>

				Test equipments calibration labs
Decision 20/06	<i>Nomination of Focal point to follow up SNMC conclusions/decisions</i>			
	<p><b>That:</b></p> <p>a) The nominated Focal Points as per <b>Appendix C</b>, forward to the current SNMC Coordinator (NAMA) a quarterly report on the status of implementation of the conclusions/decisions of SNMC 20;</p> <p>b) The current coordinator (NAMA) circulate amongst SNMC members a consolidated quarterly report on the status of implementation of the conclusions/decisions of SNMC 20;</p> <p>c) The electronic medium should be used for data exchange and reporting.</p>	Focal Point  NAMA coordinator	States to Report  NAMA to report	
<b>Agenda Item 2: Review of AFISNET operational and technical statistics of availability</b>				
Conclusion 20/07	<i>Improvement of AFS (ATS/DS &amp;AFTN) circuits</i>			
	<p><b>That:</b></p> <p>As a matter of urgency concerned SNMC States conduct immediate collaborative actions aiming to investigating on the current failing AFS circuits and clear out the deficiencies reported to SNMC and attached in <b>Appendix D</b></p>	ASECNA GCAA NAMA	Organizations to report	
Decision 20/08	<i>Mitigation of missing Flight Plans</i>			
	<b>That:</b>			No report to Secretariat on





	<b>Performance assessment</b>			
<b>Conclusion 20/10</b>	<i>Automation of AFISNET Four Levels Performance Assessment system</i>			
	<p><b>That:</b></p> <p>a) As a matter of urgency ASECNA circulate the model of four levels Performance Assessment principle for consideration by SNMC Administrations/Organizations;</p> <p>b) In order to ensure a common performance evaluation exercise an automated network Performance Assessment system development be initiated by ASECNA and presented to next SNMC meeting.</p>	<b>ASECNA</b>	<b>ASECNA to report</b>	<i>Model of four levels Performance Assessment principle circulated by ASECNA</i>
<b><u>Agenda Item 3: Implementation of Special AFIRAN meeting recommendations 6/18 and 6/19 Audit of AFISNET</u></b>				
<b>Decision 20/11</b>	<i>Terms of reference Action plan and timescale of the Audit of AFISNET</i>			
	<p><b>That:</b></p> <p>a) The revised terms of reference, the action plan and the timescale of the AFISNET audit, be adopted as per <b>Appendix E</b></p> <p>b) ICAO continues to coordinate the implementation process of the audit and launch the request for proposals for the audit to be completed within the timescale.</p>	<b>ICAO</b>	<b>Implemented</b>	<b>The Secretariat coordinate the funding mechanism and funds are now available</b>
<b>Conclusion 20/12</b>	<i>High level SNMC Administration meeting</i>			
	<p><b>That:</b></p> <p>SNMC States/Organizations convene as soon as possible under the auspices of ICAO, a high level Administration heads meeting in order to agree on the funding mechanism for the implementation of Recommendation 6/18 of SP AFI RAN.</p>	<b>ICAO</b>	<b>Not implemented</b>	<b>Conclusion no more valid</b>
<b>Conclusion 20/13</b>	<i>Participation of SNMC members in the meeting of the Task Force on the Development of a Regional Project on an AFI Integrated Aeronautical</i>			

	<i>Telecommunication Infrastructure</i>			
	<p><b>That:</b></p> <p>SNMC members endeavor to implement the Conclusion/Decisions derived from the outcome of the meetings of the Task Force for the AFI Aeronautical VSAT Networks Regional Project and actively participate in the future meetings of the Task Force for the development of an AFI Regional integrated aeronautical telecommunication infrastructure</p>	States	Partially Implemented	Task force meeting attended by SNMC members
<b><u>Agenda Item 4:</u> Interconnection and interoperability of AFISNET with its neighboring networks (CAFSAT, NAFISAT, SADC2)</b>				
Conclusion 20/14	<i>Completion of the interconnection process between AFISNET and its neighboring networks</i>			
	<p><b>That:</b></p> <p>States/Organizations pursue the interconnection process between AFISNET and the neighboring networks in order to achieve the remaining AFS circuits required for ATM operation in particular:</p> <p>a) ASECNA and ATNS to continue their technical cooperation to assist the concerned States to establish via the interconnection between AFISNET and NAFISAT/SADC 2 the Moroni/Victoria, Moroni / Dar-es-Salam, Alger/Tripoli,</p>	ASECNA ATNS	ASECNA & ATNS to report	

	<p><b>Pointe Noire/ Luanda links and stabilize the following circuits: Brazzaville/Kinshasa, Luanda/Brazzaville;</b></p> <p><b>b) ASECNA, ENNA and French DGAC to complete the establishment of the link between Algiers and Aix.</b></p> <p><b>c) ICAO continue to assist the concerned stakeholders with guidance and technical coordination meetings aiming to meeting agreement on cost effectiveness solutions for the implementation of the interconnection.</b></p>	<p><b>ASECNA</b> <b>ENNA</b> <b>France</b></p> <p><b>ICAO</b></p>	<p><b>ASECNA, ENNA, France to report</b></p>	
<p><b>Conclusion 20/15</b></p>	<p><i>Bilateral agreement covering the interconnections between AFISNET and SADC/2 and NAFISAT</i></p> <p><b>That:</b> <b>ATNS and ASECNA continue further discussions to finalize and endorse the bilateral agreement covering the interconnections between AFISNET and SADC/2 / NAFISAT and assist other SNMC members if needed, to conclude similar agreements aiming to ensuring a quality of service level supported by the links.</b></p>	<p><b>ASECNA/ATNS</b></p>	<p><b>ASECNA &amp; ATNS to report</b></p>	

	<i>AFISNET in ICAO Aviation System Block Upgrades (ASBU) context</i>			
<b>Conclusion 20/16</b>	<p><b>That</b></p> <p>SNMC States/Organizations endeavor to prepare and participate in the 12<sup>th</sup> (Montreal, 10-30 November 2012) Air Navigation Conference and take into account the ASBU concept and methodology to better conduct the AFISNET modernization exercise.</p>	<b>All States</b>	<b>Implemented</b>	
<b><u>Agenda Item 5: Outcome of ITU WRC-12 pertaining to VSATs Networks and preparation of WRC-15</u></b>				
<b>Conclusion 20/17</b>	<i>Implementation of Resolution 154 (COM 6/24)- WRC-12 and preparation of WRC-15</i>			
	<p><b>That:</b></p> <p>SNMC Sates/Organizations endeavor to:</p> <p>a) Appropriate and promote the outcome on issues of WRC-12 related to the provision of spectrum for civil aviation;</p> <p>b) Actively participate in the studies called upon by Resolution 154 (COM6/24)-WRC 12 through the activities of AFI/FMG, ACP WG F meetings and ATU regional meetings;</p> <p>c) Strengthen their collaboration with their National Authority of Regulation of Telecommunication and other stakeholders involved in the usage of aeronautical spectrum in order to agree on Collaborative Decision Making (CDM) in support to the</p>	<b>All States</b>	<b>Still valid and Partially implemented</b>	

	<b>forthcoming ICAO position for the future WRC-15/16</b>			
<b><u>Agenda Item 6: AFISNET band width re-engineering</u></b>				
	<i>Satellite back up and AFISNET band width re-engineering</i>			
<b>Conclusion 20/18</b>	<p><b>That:</b></p> <p><b>SNMC Sates/Organizations:</b></p> <p>a)                <b>develop a customer requirements to be submitted to the satellite Service Provider INTELSAT and that will address the feasibility of technical solutions to be deployed in case of satellite failure and;</b></p> <p>b)                <b>Schedule the IBS to leased band conversion with INTELSAT and complete the implementation of conclusion 17/10 and 18/13, 19/13 of respective SNMC/17, 18 and 19 meetings.</b></p>	<b>States</b>	<b>Still valid Not implemented</b>	
<b><u>Agenda Item 7: Review of the APIRG/18 conclusion related to AFISNET</u></b>				
<b>Conclusion 20/19</b>	<b>Review of the APIRG/18 conclusion related to AFISNET</b>			
	<p><b>That:</b></p> <p><b>SNMC Sates/Organizations:</b></p> <p>a)                <b>Implement APIRG/18 Conclusions 18/24, 18/25 &amp; 18/26 related respectively to:</b></p> <p>1.                <b>Contingency Planning for AFI VSAT Networks Operations</b></p> <p>2.                <b>Best practices for AFI VSAT Networks</b></p>	<b>All States</b>	<b>Still valid States to report</b>	

	<p><b>3. Modernization of AFI VSAT Networks</b></p> <p>b) <b>Increase their pace of participation to CNS/SG and APIRG forthcoming meetings.</b></p>			
<b><u>Agenda Item 8: Required Communication Performance of AMS supported by AFISNET</u></b>				
Conclusion 20/20	<i>Required Communication Performance of AMS supported by AFISNET</i>			
	<p><b>That:</b></p> <p><b>When re-engineering AFISNET States/Organizations take advantage of the benefit provided by RCP concept for the reinforcement of the Quality of Service of aeronautical mobile communication within SNMC airspace.</b></p>	All States	Still valid	
<b><u>Agenda Item 9: Review of the Term of reference and Work Programme of SNMC</u></b>				
Decision 20/21	<i>Term of reference and Work Programme of SNMC</i>			
	<p><b>That;</b></p> <p><b>The revised Terms of Reference of SNMC is adopted as presented at <b>Appendix</b></b></p>	All States	Implemented	

## APPENDIX C

**Twenty-First meeting of the AFI Satellite Network Management Committee (SNMC/21)  
(Conakry, Guinea, 16–20 December 2013)**

**Outstanding deficiencies on AFISNET (AFISNET AFS circuits to be stabilized)**

Circuit		Service	Performance		
Terminal 1	Terminal II		Average Availability	Comments	Futures actions
Brazzaville	Johannesburg	AFTN	94,32%		
	Sao Tomé	AFTN	94,1%		
Niamey	Addis Abéba	AFTN	94,83%		
Libreville	Kano	AFTN	90,77%		
	Lagos	AFTN	79,13%		
Antanarivo	Johannesburg	AFTN	87,7%		
Cotonou	Lagos	AFTN	95,98%		
	Lomé	AFTN	96,01%		
Niamtougou	Accra	AFTN	91,42%		
Accra	Kano	AFTN & ATS/DS	00,0%		
	Lagos	AFTN & ATS/DS	92,47%		
	Libreville	ATS/DS	95,88%		



**APPENDIX D**  
**Twenty-First meeting of the AFI Satellite Network Management Committee (SNMC/21)**  
**(Conakry, Guinea, 16–20 December 2013)**  
**Requirement for new AFS circuits**

<b>Station I</b>	<b>Station II</b>	<b>Service</b>	<b>Justification</b>	<b>Comments</b>
Robert	Bamako	ATS/DS	AT Coordination requirement	ASECNA and Roberts FIR to coordinate
Roberts	Abidjan	AFTN	Backup link	ASECNA and Roberts FIR to coordinate
Abidjan	Recife	ATS/DS	AT Coordination requirement	ASECNA and Brazil to coordinate
Dakar	Rochambeau	ATS/DS	AT Coordination requirement	ASECNA and French DSNA to coordinate
Moroni	Dar Es Salam	ATS/DS	AT Coordination requirement	ASECNA and ATNS to coordinate
Bangui	Gbadolite	ATS/DS	AT Coordination requirement	ASECNA and RVA to coordinate

## APPENDIX E

### Twenty-First meeting of the AFI Satellite Network Management Committee (SNMC/21) (Conakry, Guinea, 16–20 December 2013)

#### FORM OF AGREEMENT OF AFI SATELLITE NETWORK MANAGEMENT COMMITTEE (SNMC)

**ARTICLE 1:** The AFI Satellite Network Management Committee (SNMC) is composed of the following core members:

- Nigeria Airspace Management Agency (**NAMA**);
- Agence pour la Sécurité de la navigation Aérienne en Afrique et à Madagascar (**ASECNA**)
- Nigeria Civil Aviation Authority (**GCAA**)
- Roberts FIR;
- International Civil Aviation Organization (**ICAO**)

The Administrations mentioned above must be represented at the Director level in their own organizations.

Observers are listed in the Terms of Reference of SNMC and may comprise:

- Air Navigation Service Providers;
- Satcom Facilities Providers;
- Satellite Spectrum Providers;
- International Organization (ATU, ITU, SITA..);
- Airlines Association (**IATA**);
- Satcom Facilities Maintenance Personnel Association (**IFATSEA**).

**ARTICLE 2:** The SNMC will meet once every year or more frequently if required by the members, at one of the network centers and the working languages will be English and French.

**ARTICLE 3 :**

- (i) SNMC coordinating activities shall be handled by a Coordinator nominated by the State/Organization which hosts the SNMC meeting for the given year;
- (ii) The Coordinator shall be responsible for :
  - a) Liaising with the various administrations for the efficient operation of the network
  - b) Liaising with the equipment and the satellite providers as the need may arise
  - c) Undertaking such other action as may be deemed necessary
  - d) Ensure the implementation of the objectives of the SNMC
  - e) Act as an arbitrator among members

**ARTICLE 4 :** The SNMC members manage the following stations :

- **For NIGERIA:** Kano, Lagos, Maiduguri, Jos, Ilorin, Port Harcourt, Sokoto, Abuja

- **For NIGERIA:** Abuja with VSAT nodes in Lome, Niamtougou, Cotonou and Sao Tome
- **For ASECNA:** Abidjan, Bangui, Brazzaville, Cotonou, Dakar, Douala Libreville, Lome, N'djamena, Niamey and Ouagadougou
- **For ROBERTS FIR:** Roberts

This list is not exhaustive and may be modified according to the operational needs and extensions of the network.

**ARTICLE 5** : The SNMC's objectives are as follow:

- Ensure the complete implementation of **AFISNET**
- Verify that the earth stations of the network meet aeronautical telecommunication required performance-criteria
- Harmonize reporting methodology procedures
- Judge the necessity of and redeployment of the technical assistance
- Encourage cooperation, in various fields, between network centers, e.g., training, spare parts exchange, and fault location/repairs
- Study, and where feasible, undertake the extension of the network to other African countries within member states respective FIRs.
- Propose network integration and interoperability with other African aeronautical telecommunications networks
- Liaison and planning with satellite telecommunications service providers.

**ARTICLE 6** : SNMC members may have technical experts accompanying them to meetings. These experts will be chosen according to their experience and competencies in various civil aviation related fields: aeronautical telecommunications, air traffic control, meteorology, etc...

**ARTICLE 7** : The SNMC Terms of Reference completes this present Form of Agreement as guidelines for SNMC Work Programmes.

**ARTICLE 8** : The SNMC is not financially autonomous. Each Administration shall make adequate financial provision based on its participation in the committee's activities.

**ARTICLE 9** : This agreement becomes effective from the date of signature by all Administrations.

**ARTICLE 10** : In case legal disagreements arise due to the execution of the present protocol, members will be expected to seek a friendly settlement amongst themselves.

Name /Organization	Signature	Date
<b>For NAMA</b>		5
<b>For ASECNA</b>		5
<b>For GCAA</b>		5
<b>For ROBERTS FIR</b>		5
<b>For ICAO (WACAF)</b>		5

**TERMS OF REFERENCE OF THE SATELLITE NETWORK  
MANAGEMENT COMMITTEE (SNMC)**

## 1. Mandate of the Satellite Network Management Committee

- 1.1 Decide on the network concept and topology in accordance with the relevant ATM operation requirements and based on ICAO SARPs and guidance materials.
- 1.2 Ensure the continued operation of the AFISNET, meeting the CNS/ATM plan requirements of the AFI /MID /EUR Regions while taking into consideration CNS/ATM plans of adjacent regions, and including approval of deployment plans and/or extension plans.
- 1.3 Decide on type and levels of service to be provided, and monitor the performance of the Network (facilities and leased band providers) to ensure that service delivery meets the Required Service Performance Level (RSPL) and the Required Communication Performance criteria previously pre-determined when applicable, in accordance with the Manual of Required Communication Performance (RCP Doc. 9869).
- 1.4 Ensure that participating States/Organizations provide statistics on the Network Performance, and investigate service delivery complaints from users.
- 1.5 Review and take the appropriate actions to clear the service dysfunctions within the RSPL /RCP defined criteria in line with ATM PBN and SMS requirements.
- 1.6 Monitor the harmonization of the implementation of facilities, services and where necessary ensure interregional connectivity, taking due account of cost/benefit analysis, business case development and financing issues:
  - Study the extension of the network to other countries.
  - Propose the network integration and interoperability with other neighboring networks
- 1.7 Monitor and harmonize the Network maintenance operation and management by defining a cooperation methodology between network centers with regard to:
  - Maintenance personnel team training and exchange, redeployment if necessary of a technical assistance team or personnel;
  - Spare parts exchange, fault location/repairs, and turnaround time
  - Development and modernization of AFISNET after a Joint Technical Evaluation and Re-engineering team assessment.
- 1.8 Review and adopt the annual follow up on the meeting conclusions and update the future work programme.
- 1.9 The report of the Satellite Network Management Committee is to be addressed to SNMC members States/Organizations

## 2. Composition and organization of the Committee

### 2.1 Members

The Satellite Network Management Committee (SNMC) is composed of **core member States/Organizations** hosting/operating AFISNET nodes namely:

- **NAMA (Nigeria)**
- **ASECNA (18 Member States)\***
- **Roberts FIRs (Liberia, Sierra Leone, Guinea)**

- **GCAA (Ghana)**

## 2.2 Observers

Observers as composed below can participate in SNMC meetings but shall have no voting rights:

- Air Navigation Service Providers (**ENANA**-Angola, **ENNA**-Algeria, **DCA**-Mauritius FIR; **GCAA**-The Gambia, - **ENASA**-Sao Tome & Principe, **AENA**-Spain, **DGAC**-France, **RVA**- DRC...);
- AFISNET SATCOM Facilities Providers;
- Satellite Spectrum Providers (e.g. **INTELSAT**);
- National Frequency Regulators;
- Airline Associations (**IATA**);
- Maintenance Personnel Association (**IFATSEA**);
- Neighboring Networks Committees (**CAFSAT**, **NAFISAT** & **SADC/2...**).
- Air navigation equipment manufacturers.
- Search & Rescue agencies.

2.3 At the beginning of every ordinary meeting, the chairperson of the Committee shall be proposed by the host organization and nominated by SNMC members. The chairperson's mandate shall not exceed one year, unless under exceptional conditions that no meeting takes place the following year. In that case, the chairperson shall have his/her mandate extended by default until the next SNMC meeting is held.

2.4 ICAO shall be the Secretary of the Committee.

*\* Benin, Burkina Faso, Cameroon, Centrafrique, Chad, Comoros, Congo, Cote d'Ivoire, Gabon, Equatorial Guinea, France, Guinea Bissau, Madagascar, Mali, Mauritania, Niger, Senegal, Togo*

2.5 To ensure that the Committee functions optimally, the designated representatives of Air Navigation Service Providers should have experience in the provision of air navigation infrastructure and services. Advisors may accompany the member organization's Representative.

## 3. Participation of International Organizations

Apart from those listed in paragraph 2, the Committee may invite representatives of appropriate regional and international organizations (**ATU**, **ITU**, **EUROCONTROL**, **SITA**, **ECOWAS**...) to attend meetings in the capacity of observer.

## 4. Establishment and Dissolution of Contributory Bodies

4.1 In order to assist in its work, the Committee may establish bodies, e.g. task forces, charged with preparatory work on specific issues. Representation on such contributory bodies should be by specialists in the fields concerned and who are familiar with the issues under consideration.

4.2 The establishment and work of contributory bodies shall be governed by the following provisions:

- a) A contributory body shall only be formed when it has been clearly identified that it is likely to make a substantial contribution to the resolution of an issue in question.
- b) A contributory body shall be given clear and concise terms of reference describing its task and an expected target date for its completion.
- c) The composition of a contributory body shall be such that, although intended to be as small as possible, all participating States and any organization deemed to be able to make valid contributions shall be given an opportunity to participate in it.
- d) A contributory body shall be dissolved as soon as it has either completed its assigned task or it has become apparent that work on the subject in question cannot be usefully continued.

## 5. Working arrangements

- 5.1 The Committee's ordinary meetings will be hosted by one of the member States/Organizations on a rotational basis and held at least once a year;
- 5.2 The Committee can hold, in case of absolute necessity, extraordinary meetings to clear out urgent problems that may be a threat to the service provided by the network;
- 5.3 Invitation letters to meetings will be issued by the Secretariat in coordination with the hosting State/Organization.
- 5.4 Decisions shall be reached by consensus.
- 5.5 Two-thirds of members shall constitute a quorum and, where a quorum is not achieved, decisions will be reached through correspondence under the coordination of the chairperson.



**APPENDIX F**

**Twenty-First meeting of the AFI Satellite Network Management Committee (SNMC/21)  
(Conakry, Guinea, 16–20 December 2013)  
Template for SNMC future venue**

SNMC Meeting	Year	Hosting State/Organization	Remarks
SNMC/20	2012	Nigeria	Completed
SNMC/21	2013	Roberts FIR	Completed
SNMC/22	2014	ASECNA	To be scheduled
SNMC/23	2015	Ghana	
SNMC/24	2016	Nigeria	
SNMC/25	2017	Roberts FIR	