



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

**Fourth Meeting of the Central Atlantic FIR Satellite Network (CAFSAT) Management Committee  
(CNMC/4)  
(Buenos Aires, Argentina, 4-5 August 2014)**

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

*Planning, implementation and operation of very small aperture terminal (VSAT) networks in the AFI Region*  
(Presented by the secretariat)

**SUMMARY**

The purpose of this paper is to analyze the status of implementation of AFI/RAN

**Conclusion 6/19:** Planning, implementation and operation of very small aperture terminal (VSAT) networks in the AFI Region that calls for regular meetings of all AFI networks managers

**Reference:**

Report of SP AFI RAN Meeting

Conclusions of the First Joint Meeting of the AFI Aeronautical VSAT Networks Managers (AFI/VSAT/1))

Summary of conclusions of the Review Meeting of the Task Force on the Development of a Regional Project on an AFI Integrated Aeronautical Telecommunication Infrastructure (AFI VSAT/TF/RM)

Draft Conclusions/Decisions of the Task Force

**Related ICAO Strategic Objectives: A: Safety; B: Air Navigation Capacity and Efficiency**

**Related ASBU Bloc 0 Modules, Performance Improvement Aerials and Applications:**

**B0-FRTO/PIA3-PBN En Route Trajectories;**

**B0-FICE/PIA2-AIDC,**

**B0-DATM/PIA2-AIM,**

**B0-TBO/PIA4-Datalink**

**B0-AMET/PIA2-MET**

**Action by the meeting in paragraph 3**

**1. Introduction**

The AFI RAN meeting held in Durban, South Africa from 24 to 29 November 2008 formulated **Conclusion 6/19: Planning, implementation and operation of very small aperture terminal (VSAT) networks in the AFI Region** that calls for regular meetings of all AFI networks managers and reads as follows:

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

*That*

*All entities involved with planning, implementation and operation of very small aperture Terminal (VSAT) networks in the AFI Region hold regular joint meetings under the auspices of ICAO regional offices for the purpose of harmonization and eventual realization of a seamless AFI communication network supporting all present and future communications, navigation, and Surveillance (CNS) Systems*



Since Durban meeting, many actions have been undertaken by States/Organizations with ICAO regional Offices WACAF & ESAF support to implement this conclusion.

## 2. Discussion

2.1 The third CNMC meeting held in Dakar from 14 to 15 July 2013 reported on the activities undertaken by the AFI Aeronautical VSAT Networks Managers (AFI VSAT/1) since the first Joint Meeting held in Kwa-Zulu Natal, South Africa on June 2011 followed by the review Meetings of the Task Force on the Development of a Regional Project on an AFI Integrated Aeronautical Telecommunication Infrastructure (AFI VSAT/TF/RM) held in Dakar, Senegal, from 3 to 5 October 2011 and in Douala, Cameroon, from 28 February to 1<sup>st</sup> March 2012.

2.3 These meetings addressed issues pertaining to the sustainability of the VSAT Networks as well as the harmonization of the networks maintenance and management and the allocation of sufficient resources in order to continuously maintain an acceptable level of performance of these VSAT networks and achieve a high degree of interoperability while transitioning towards an integrated ATN infrastructure.

2.4 In the framework of the implementation of APIRG/18 Decision 18/28 establishing a Task Force for the AFI Aeronautical VSAT Networks Regional Project, the first meeting of the Task Force was held from 26 to 28 June 2013 in Pretoria with the main objective to pursue the work done by the AFI Aeronautical VSAT Network Managers towards the development of an AFI integrated aeronautical telecommunication infrastructure. This Task Force was held back to back with a Regional Workshop on Aeronautical Telecommunication Network (ATN).

2.5 These two meetings gave opportunity to clarify the issues pertaining to the ground/ground and air/ground components of ATN and to continue the work on the definition of the conditions for the development of a robust sustainable telecommunication infrastructure based on the modernization of the existing VSAT Networks (AFISNET, CAFSAT, SADC/2, NAFISAT). The issues related to the performance of the networks (availability, speed of the ground segment to support ATN application such as AMHS and AIDC) were considered by the meetings.

2.6 The conclusions and decisions in Appendix of the Task Force were endorsed by the APIRG CNS/SG and adopted by APIRG 19 were presented during the last CNMC/3 meeting and their implementation is ongoing based on the project approach that will be governing APIRG activities for the next future..

## 3. Actions by the meeting

The meeting is invited to:

- a) Take note of the above information
- b) Encourage CAFSAT concerned States/Organizations to:
  - ✓ Implement the Conclusion/Decisions derived from the outcome of the meetings of the Task Force for the AFI Aeronautical VSAT Networks Regional Project;
  - ✓ Pursue their effort to actively participate in the future activities of the Task Force as presented at CNM/3 meeting

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## APPENDIX

**Summary of Conclusions and Decisions of the First Meeting of the APIRG Integrated Regional Telecommunication Infrastructure Task Force (IRTI/TF/1)**

| <b>Number</b>          | <b>Title</b>  |
|------------------------|---|
| <b>AGENDA ITEM 1</b>   | <b>ELECTION OF THE CHAIRPERSON AND VICE-CHAIRPERSONS OF THE TASK FORCE</b>  |
|                        | NIL   |
| <b>AGENDA ITEM 2</b>   | <b>ADOPTION OF AGENDA AND REVIEW OF THE TERMS OF REFERENCE OF THE TASK FORCE</b>  |
|                        | NIL   |
| <b>AGENDA ITEM 3</b>   | <b>REVIEW OF AFS OPERATIONAL PERFORMANCE</b>  |
| <b>Conclusion 1/01</b> | <p><i>Harmonization of the collection of the statistics on the performance of the VSAT networks</i></p> <p>That;</p> <p>a) The Secretariat finalize the agreed Performance Data Collection Form (PDCF) for use by States/Air Navigation Services Providers (ANSPs) to harmonize the monitoring, collection and reporting of technical and operational data on aeronautical telecommunication networks' characteristics and performance, including end-user/end user performance statistical data as part of the best practices adopted by the APIRG under its Conclusion 18/25.</p> <p>b) States should apply the four-level assessment model and make use of available software tools in order to increase accuracy of the collected and reported information.</p> |
| <b>1/02</b>            | <p><i>Investigations on missing flight plans</i></p> <p>That States should take due account of the performance of the aeronautical telecommunication infrastructure when conducting investigations on the critical issue of missing plans.</p>  |
| <b>AGENDA ITEM 4</b>   | <b>DEVELOPMENT OF A REGIONAL PROJECT ON AN INTEGRATED AERONAUTICAL TELECOMMUNICATION INFRASTRUCTURE</b>   |
|                        | <b>4.1 Technical issues</b>   |
| <b>1/03</b>            | <p><i>States' ATN Implementation Plans and Implementation Status</i></p> <p>That the ICAO Regional Offices conduct a survey on States plans to implement the elements of the Aeronautical Telecommunication Network, and the implementation status thereof.</p>   |
| <b>1/04</b>            | <p><i>Technical Action Plan</i></p> <p>That the Technical Team of the Task Force pursue its work based on the action plan provided at Appendix XX to this report, and prepare a progress report to be submitted to the next meeting of the APIRG Communications, Navigation and Surveillance (CNS) Sub-group (CNS/SG/5).</p>  |
| <b>1/05</b>            | <i>Review of the AFI ATN Strategy and Architecture</i>  |



|                      |  |
|----------------------|--|
|                      | <p><b>That the Task Force review and update the AFI ATN Architecture Plan adopted by the APIRG/18 Meeting in order to reflect developments related to:</b></p> <ul style="list-style-type: none"> <li>a) <b>SARPs and guidance material,</b></li> <li>b) <b>Global Air Navigation Planning Framework,</b></li> <li>c) <b>Aviation System Block Upgrades (ASBU) Methodology and associated Communications, Navigation and Surveillance (CNS), Information Management and Avionics Technology Roadmaps,</b></li> <li>d) <b>Alignment of regional air navigation plans (ANPs) and regional supplementary procedures (SUPPs) in accordance with Recommendation 6/11 of the 12<sup>th</sup> Air Navigation Conference; and</b></li> <li>e) <b>Status of implementation by States of the ATN infrastructure and supported applications.</b></li> </ul>                       |
| <b>1/06</b>          | <p><b>AMHS Trials</b></p> <p><b>That States hosting ATN backbone centres that have implemented AMHS conduct trials in accordance with the AFI ATN strategy and report their results to the Task Force.</b></p>   |
|                      | <b>4.2 Administrative issues</b>   |
| <b>1/07</b>          | <p><i>Administrative/Legal Principles and recommendations</i></p> <p><b>That the Task Force agree to the administrative and legal principles and recommendations contained in Appendix XX to this report, including:</b></p> <ul style="list-style-type: none"> <li>a) <b>Type of Agreement</b></li> <li>b) <b>Institutional framework</b></li> <li>c) <b>Funding Mechanism</b></li> <li>d) <b>Oversight body</b></li> <li>e) <b>Delegated ANSP aspects</b></li> <li>f) <b>Handling of implementation costs</b></li> <li>g) <b>Cost Determination</b></li> <li>h) <b>Cost sharing</b></li> <li>i) <b>Cost Recovery mechanism</b></li> <li>j) <b>Budget Approval</b></li> <li>k) <b>Financial audit and taxation</b></li> <li>l) <b>States' Commitment</b></li> <li>m) <b>Legal, Managerial and other contracting aspects</b></li> <li>n) <b>Maintenance</b></li> </ul> |
|                      | <b>4.3 Financial issues</b>  |
| <b>Decision 1/08</b> | <i>Coordination between Task Force Teams</i>   |



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|------------------------|---|
|                        | <b>That the Task Force Teams should coordinate their activities to identify and exchange the relevant inputs/outputs to progress the work of the Task Force.</b>  |
| <b>Conclusion 1/09</b> | <p><i>Need for financial, operational and planning information</i></p> <p>a) That States / ANSPs provide necessary inputs regarding financial (historical and forecast revenue and related costs, interest cost, depreciation costs), operational (forecast, staffing levels, customer satisfaction, etc.) and planning (short, mid and long term master plan and business cases) data for comparison and bench marking.</p> <p>b) That IATA as users' representative assist the Task Force in the collection of the required information.</p>  |
| <b>AGENDA ITEM 5</b>   | <b>INTERNATIONAL PROTECTION OF THE 3.4-4.2 GHZ BAND OPERATED BY AERONAUTICAL VSAT NETWORKS</b>  |
| <b>Conclusion 1/10</b> | <p><i>Protection of the C-band operates by AFI VAT networks</i></p> <p>That States should report their respective Telecommunication Authorities and the ICAO Regional Offices all cases of interference being experienced in the operation of aeronautical VSAT networks to document the studies on possible technical and regulatory measures as called for under ITU WRC-12 Resolution 154, in order 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.</p> |
| <b>AGENDA ITEM 6</b>   | <b>FUTURE WORK PROGRAMME OF THE TASK FORCE</b>  |
| <b>Decision 1/11</b>   | <p><i>Terms of reference, future work programme and composition of the Task Force</i></p> <p>That the terms of reference, future work programme and composition of the Task Force on the Development of an Integrated Regional Telecommunication Infrastructure be amended as proposed in Appendix XX to the report.</p>  |
| <b>Decision 1/12</b>   | <p><i>Re-establishment of an AFI ATN Task Force</i></p> <p>That,</p> <p>a) APIRG consider the establishment of a Task Force to address all aspects related to the implementation of the ICAO Aeronautical Telecommunication Network (ATN) in the AFI Region, including implementation of the applicable Aviation System Block Upgrades (ASBU) modules services and supporting infrastructures.</p> <p>b) The secretariat develop the draft Terms of Reference of the proposed re-instatement of the ATN Task Force for further consideration by the CNS/SG/5 meeting (16-20 September 2013).</p>                              |
| <b>AGENDA ITEM 7</b>   | <b>ANY OTHER BUSINESS</b>   |
|                        | <b>NIL</b>  |