

SAT 18 REPORT

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



**REPORT OF THE EIGHTEENTH MEETING ON THE IMPROVEMENT OF AIR TRAFFIC
SERVICES OVER THE SOUTH ATLANTIC (SAT/18)**

(DAKAR, SENEGAL, 17 to 19 JULY 2013)

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

History of the meeting

1 Place and duration of the meeting

1.1 The Eighteenth Informal Coordination Meeting on the improvement of air traffic services over the South Atlantic (SAT/18) was held at the Conference Room of the ICAO WACAF Regional Office in Dakar, Senegal, from 17 to 19 July 2013, at the kind invitation of Senegal. The SAT18 was held back to back with the SATFIT8 and both meetings were supported by ASECNA the regional ANSP of which Senegal is member State.

2. Opening ceremony

2.1 The meeting was officially opened by Mr **Magueye Marame NDAO**, Director General of ANACIM (CAA of Senegal) in the presence of Mr **Gaoussou Konaté**, Deputy Regional Director of the ICAO WACAF Office. Mr. Ndao firstly welcomed the participants to the three meetings (CNMC/3, SATFIT8 and SAT18) being held back to back in Dakar this year. Then in his welcome remarks, Mr. Magueye NDAO emphasized the importance of the SAT Group meetings with regard to the improvement of ATS services and the safety of operations over the South Atlantic (SAT). He reminded the participants with several achievements of the SAT Group which were recorded by the aviation community as success stories. He recalled also how Senegal has actively participated in the activities of the SAT Group since the beginning and reaffirmed the strong commitment of his State to the work carried out by the SAT Group. Finally he wished to the participants fruitful deliberations and a nice stay in Dakar.

3. Organization, Secretariat and attendance

3.1 Mr. **Albert Aidoo Taylor**, Director Air Traffic Management, Ghana Civil Aviation Authority, was unanimously elected as Chairperson of the meeting.

3.2 Mr. **Sadou MARAFA**, ATM Regional Officer of the ICAO WACAF Office, was the Secretary of the meeting. He was assisted by **François-Xavier SALAMBANGA** CNS Regional Officer ICAO Dakar Office.

3.3 The meeting was attended by 64 participants from twelve (12) ICAO contracting States namely, Angola, Brazil, Cape Verde, Cote d'Ivoire, Ghana, Liberia, Mauritania, Morocco, Portugal, Senegal, South Africa, Spain, and six (6) International Organizations (ASECNA, ARINC, IATA, IFALPA, Roberts FIR and SITA).

3.4 The list of the participants and their contact addresses is at **Appendix A** to this report.

4. Working languages

4.1 The meeting was conducted in the English language and its relevant documentation was presented in this language.

5. Agenda of the meeting

5.1 The meeting adopted the following agenda and discussed its items when appropriate, within the ATM or the CNS Working Group, or during the plenary sessions:

Agenda Item 1: Election of the chairperson and adoption of the agenda (*Plenary session*)

Agenda Item 2: *Air traffic management (ATM) (by the ATM Working Group)*

1. Follow up of SAT/17 Conclusions pertaining to the ATM field
2. SATMA report on Traffic Statistics, Safety procedures and operational procedures in the EUR/SAM corridor.
3. Follow up on operations in the AORRA airspace.
4. ATS Contingency planning
5. Any other ATM business

Agenda Item 3: *Communications, navigation and surveillance (CNS) (by the CNS Working Group)*

1. Follow up of SAT/17 Conclusions pertaining to the CNS field
2. Review of AFS performance
3. CNMC issues
4. Any other CNS business

Agenda Item 4: *Communications, navigation and surveillance / Air traffic management (CNS/ATM) Systems (Plenary session)*

1. Harmonization of ADS/CPDLC programmes
 - Review of the Report of the Eighth SAT FANS 1/A Interoperability Team (SAT/FIT/8)
 - Review of the report of the third meeting of the CAFSAT Network management committee
2. RNP4 in the EURSAM corridor

Agenda Item 5: *Adoption of the conclusions/decisions of the SAT/18 meeting (Plenary session)*

Agenda Item 6: *Future work programme (Plenary session)*

Agenda Item 7: *Any other business (Plenary session)*

6. Conclusions and Decisions of the meeting

The meeting adopted the following conclusions and decisions:

Agenda Item 2: *Air traffic management (ATM) (by the ATM Working Group)*

2.1. Follow up of SAT/17 Conclusions pertaining to the ATM field

2.2. SATMA report on Traffic Statistics, Safety procedures and operational procedures in the EUR/SAM corridor.

Conclusion SAT18/01: EUR/SAM Corridor Traffic Data for Risk Assessment

That:

1. **Taking into account the difficulty of gathering relevant data from EUR/SAM corridor ACCs, concerned States will send to SATMA the data collected in a period of six months (Jan-Jun) to do the required Risk Assessment. States to send the data (Jan-Jun) up to 30th September each year.**

2. Concerned States to investigate a possible new tool for compiling the necessary data to be sent to SATMA for the risk assessment
3. Concerned States (focal points) to coordinate and to exchange information by email and, if needed, to set a teleconference.

Decision SAT18/01: LHD

That:

EUR/SAM Corridor ACCs to continue sending LHD reports to SATMA on a monthly basis, from 1st to 15th of each month.

2.3. Follow up on operations in the AORRA airspace.

Conclusion SAT18/02: Additional Waypoints to increase flexibility between West Africa and North America.

That:

1. The meeting agreed on the principle of the implementation the proposed new waypoints from IATA (**Appendix C, part I**)
2. All concerned ACCs to discuss internally the feasibility of this implementation, target effective AIRAC date 14 November 2013. States to send to IATA, ICAO secretariat in copy, a response by 15 October 2013.

Conclusion SAT18/03: Additional waypoints to optimize Operations in the EUR/SAM Corridor

That:

Concerned ACCs (Dakar, Canarias, Lisbon, Santa Maria, Sal) to discuss internally the feasibility of the implementation of new waypoints proposed in the paper (**Appendix C, part II**)

2.4. ATS Contingency planning

Conclusion SAT18/04: Contingency Planning

That:

SAT States to review the Contingency Plan, presented in SAT17 by South Africa, and to send comments to JohnnyS@atns.co.za by 30th September 2013. To this regard, States also to notify if no additional comments.

2.5. Any other ATM business

Conclusion SAT18/05: Ascension Island FHAW/ASI and its criticality to airline operations

That:

The Dakar ICAO secretariat to coordinate with Lima ICAO office in order to:

- Publish the 30 hours TAFs for FHAW/ASI.
 - Determine how operationally important data concerning FHAW/ASI can be provided to all stakeholders to ensure safe operations.
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Conclusion SAT18/06: Co-ordination failures in the SAT region

That:

SAT member States to make a concerted effort to report all co-ordination failures to their respective RMA's for processing and to find technical, procedural or/and human interface solutions.

Agenda Item 3: *Communications, navigation and surveillance (CNS)* (by the CNS Working Group)

3.1 Follow up of SAT/17Conclusions pertaining to the CNS field

Conclusion 18/07: Implementation of the ATS/DS Circuit between Luanda and Atlántico

That:

As a matter of urgency ENANA (Angola);

- a) Formally endorse the draft Plan of Action for the implementation of the CAFSAT node of Luanda developed by the Secretariat and presented at **Appendix D**;**
- b) Take the appropriate actions to expedite the implementation of the Plan of Action in coordination with the project to modernize Recife CAFSAT node currently conducted by Brazil;**
- c) Convene, commencing no later than end of September 2013, monthly coordination e-meetings with Brazil and involving the Secretariat, SAT Chairperson, ISDEFE (formerly INSA) to agree on the adjustment on planning of the effective implementation of the ATS/DS circuit between Luanda and Recife before the end of December 2013.**

Follow up Conclusion 17/07: Trials for extension of ATS-N5 Voice switching protocol

Conclusion 18/08: ATS Voice Switching systems

That:

SAT ATCs pursue the investigation on their VCCs capability to handle the ATS voice N5 protocol and share the information with their concerned neighboring centers in order to conduct trials.

Trials on ATS/DS VoIP

Conclusion 18/09: Trials on ATS/DS VoIP

That:

SAT ATCS conduct when possible trials on VoIP as component of the Aeronautical Network (ATN) Ground/Ground component, and report to SAT/19 meeting.

Conclusion 18/10: Implementation of AIDC

That:

SAT ATCs,

- a) Consider the implementation of AIDC as enabler to the interoperability between ATM systems;
- b) Conduct trials on AIDC with regard to the requirements of ATM Global Operational Concept (Doc. 9854) aiming to enhancing Air navigation safety and efficiency within the SAT region.

Follow up Conclusion 17/08: Implementation of AMHS within the SAT region

Conclusion 18/11: Implementation of AMHS within the SAT region

That:

In order to ensure the interoperability between systems through the implementation of ATN within the SAT region,

- a) The SAT Secretariat finalizes the assessment on the current status of implementation of AMHS;
- c) SAT members commence the interconnection of AMHS systems based on the strategies of implementation of the AFI, EUR and SAM regionals Air Navigation Plans;
- c) ICAO pursue the assistance to SAT members in the implementation of AMHS through Regional seminars and workshops.

3.2 Review of AFS Performance

Conclusion 18/12: Automation of the collection of AFS Performance

That:

SAT members undertake the automation of the collection of AFS performance in accordance with the model, methodology and technical guidance developed by the specialized study group established by CNMC/3.

Decision 18/02: Procedure for the investigation missing Flight Plans

That:

The procedure for the investigation on missing flight plans developed by ASECNA is adopted as attached in **Appendix E**

Decision 18/03: Establishment of local Missing Flight Plan Investigation Working Groups

That:

SAT members establish local missing Flight Plans Investigation Working Groups involving all stakeholders (ATCs, AIM, COM, Maintenance personnel...) in order to investigate on missing Flight Plans and take the adequate mitigation actions

Conclusion 18/13: Investigation on Missing Flight Plans

That:

- a) ASECNA circulate the adopted procedure of investigation on missing Flight Plans and the example of corrective actions taken to minimize the pace of missing flight plans;
- b) Based on this procedure SAT ATCs conduct with all stake holders (IATA, Airlines, ANSPs...) daily detailed investigation on missing Flight Plans and report quaternary to SAT Chairperson.

3.3 CNMC issues

Decision 18/04: Adoption of the CNMC3 report

That:

The SAT members approve the report on the 3rd CNMC meeting, its conclusions and decisions as presented at **Appendix F** to this report

Agenda Item 4: Communications, navigation and surveillance / Air traffic management (CNS/ATM) Systems (Plenary session)

Decision SAT 18/05: Adoption of SAT/FIT/8 Report and amendments to the SATFIT TORs and work programme

That,

The SAT members approve the report of the SATFIT/8 meeting, its conclusions and

decisions, the amendments to the SATFIT TORs and work programme, as presented to SAT/18 meeting

Conclusion SAT18/14: Implementation of RNP 4 in the EUR/SAM corridor

That:

- 1. SATMA consolidate the study on the implementation of RNP4 in the EUR/SAM corridor and establish an implementation work plan describing:**
 - a. The responsibilities and tasks of all stakeholders (ANSPs, States, Operators)**
 - b. Milestones and corresponding timelines**
 - c. Ways and means to conduct the required pre-implementation safety assessment**

- 2. SATMA will contact States, ANSPs and IATA to compile data and information required**

Agenda Item 5: Adoption of the conclusions/decisions of the SAT/18 meeting (Plenary session)

Agenda Item 6: Future work programme

Decision 18/06: TORs and work programmes of the SAT Group

That,

The TORs and work programmes of SAT (ATM and CNS Working Groups) are amended as shown at **Appendix G** to this report.

Agenda Item 7: Any other business (Plenary)

Conclusion 18/15: Participation of Trinidad & Tobago, Argentina, Uruguay & French Guyana to SAT Meetings

That:

As a matter of coordination efficiency Trinidad & Tobago, Argentina, Uruguay & French Guyana endeavour to regularly attend the SAT meetings

Summary of Discussions

Agenda Item 1: Election of the chairperson and adoption of the agenda

The meeting unanimously elected Mr. **Albert Aidoo Taylor**, Director Air Traffic Management, and Ghana Civil Aviation Authority, as Chairperson of the meeting.

Agenda Item 2: Air traffic management (ATM)

2.1 Follow up of SAT/17 Conclusions pertaining to the ATM field

2.1.1 The meeting considered the status of implementation of the conclusions emanating from the seventeenth meeting of the improvement of air traffic control in the South Atlantic (SAT/17), which was held in Las Palmas, Canarias (Spain) , from 18 to 20 April 2012, as presented by the secretariat. The meeting noted that the implementation of most of these conclusions was on going, or needed continuous actions to be taken by concerned parties. The meeting urged SAT members to make any effort to implement these conclusions, therefore reformulated or complemented all the conclusions and decisions emanating from the SAT/17 Meeting which were ongoing or deemed still valid. The general status of the implementation of SAT/17 conclusions and decisions is shown at **Appendix B** to this report.

2.2. SATMA report on Traffic Statistics, Safety procedures and operational procedures in the EUR/SAM corridor

Traffic Statistics in the EUR/SAM corridor

2.2.1 The meeting was presented with global and detailed information about the air traffic statistics of the EUR-SAM Corridor during year 2012 as well as the evolution of these figures since 2004. It was noted that during 2009, the global figures of the EUR-SAM corridor showed a relevant drop of -16%. Likewise, for the last two years, an important increase was experimented: 2% and 11% respectively for 2010 and 2011. However, the upward trend has not been consolidated in 2012, showing a decrease of 2% year-on-year average. Globally, the corridor is at similar level than during 2007 or inclusive 2011 with the same average traffic per day.

2.2.2 Concerning the traffic on ATS routes, the use of ATS routes remains with the same tendency detected after the implementation of the two unidirectional routes. In this way, the use of UN741 (15%) is gradually decreasing and the use of UN866 (25%) remains stable. Besides, UN866 shows a clear increase since the implementation of the unidirectional two route system, underused in 2006 with 14% of the traffic up to the 25% of the traffic during 2012. UN873, managing the 46% of the total traffic of the Corridor, is the most demanded route. This bidirectional route needs special attention to its evolution. The use of the other bidirectional route, UN857 (13%) has decreased with respect to 2011, being the average use still moderate. The use of RANDOM route, 1%, shows a steady decrease.

2.2.3 These statistical data of the EUR-SAM Corridor are available on the SATMA web page: www.satmasat.com .

EUR/SAM Corridor Traffic Risk Assessment

2.2.4 It was recalled that SATMA has been performing the required periodical Risk Assessment for the region since RVSM/RNP10 was implemented in the EUR/SAM corridor in January 2002 and that the CRM model approved by ICAO to perform Safety Assessment in RVSM areas is strongly based on Traffic Data and on LHD deviations. So, it is important that this basic Data Set, regarding Deviations and Traffic, is reported properly and on time as a requirement to perform the Risk Assessment

2.2.4 In this regard SATMA reported once more that it was not receiving the required monthly data

from concerned ACCs. Moreover, in the data provided sometimes there is not information of all the needed waypoints and, in some other cases, the information is incoherent. As a result, trajectories and information at required waypoints (i.e., time and FL) have to be assumed, considering the most logical routes and speeds for the extrapolation.

2.2.5 The meeting noted that, despite regular reminders sent to States on the issue, the question of gathering relevant traffic data to perform accurate risk assessment keeps on being a real challenge. The meeting extensively elaborated on this issue, reckoning that is time to find a solution.

2.2.6 In this context, it was proposed that, as ICAO provisions permit, to perform the periodical CRM assuming a shorter period (few months per year) but including deviation reports of the whole year. This would result in a limited Safety Assessment as not all data of the whole EUR/SAM Corridor for the whole year would be included.

2.2.7 The meeting agreed to the proposal and therefore formulated the following Conclusion:

Conclusion SAT18/01: EUR/SAM Corridor Traffic Data for Risk Assessment

That:

- 1. Taking into account the difficulty of gathering relevant data from EUR/SAM corridor ACCs, concerned States will send to SATMA the data collected in a period of six months (Jan-Jun) to do the required Risk Assessment. States to send the data (Jan-Jun) up to 30th September each year.**
- 2. Concerned States to investigate a possible new tool for compiling the necessary data to be sent to SATMA for the risk assessment**
- 3. Concerned States (focal points) to coordinate and to exchange information by email and, if needed, to set a teleconference.**

LHD Monitoring in the EUR/SAM Corridor

2.2.5 SATMA presented to the meeting, the evolution of the LHDs reported to it for year 2012.

2.2.6 During this period, 60 LHD reports were delivered to SATMA by the focal points of the EUR-SAM Corridor ACC's (60 reports).

2.2.7 The most common reason of the LHD, 58 reports, is still the same than on previous SATMA reports, "operational coordination error between adjacent ACC's". The causes of these operational errors are as follows;

- Entry into airspace at incorrect flight level: 30 reports
- Entry into airspace at incorrect estimate & Flight Level: 01 report
- No revision of the ETO over the boundary point by the transferring ACC: 14 reports
- Total lack of data (traffic without estimate over the boundary): 11 reports
- Entry into airspace at different coordinated COP: 02 reports
- Flight crew climbed without ATC Clearance: 01 report
- Technical issues: 01 report

2.2.8 The number of the LHD reported for this period, a total of 60 LHD's received, shows an important decrease compared with the number of LHD received by SATMA and discussed on past SAT Meetings, (124 on SAT16 and 206 on SAT17). This fact does not necessarily mean that the number of

operational errors is decreasing.

2.2.9 The distribution of LHDs per route is as follows: RANDOM (5), UN741 (13), UN866 (16), UN873 (20), UN857 (6). Other details can be found in appendix A to WP/05 available on the ICAO WACAF web page under SAT/18 meeting.

2.2.10 The meeting was informed that, following the Decision SAT15/01, SATMA continue sending, for its investigation to the involved ACC's, the LHD reports send by its adjacent ACCs. Only in 07 cases, the result of the internal investigation of the ACC's has been transmitted to SATMA. In order to propose mitigation measures to help reduce the LHD's, SAT ACC's are recommended to submit to SATMA every three months the results of their internal investigations indicating conclusions, causal factors of the deviations and corrective actions implemented.

2.2. The meeting discussed on the information and figures provided by SATMA on the LHDs and encouraged SAT ACCs and aircraft operators to reinforce the policy of reporting as a way to detect, solve and implement common safety solutions along the EUR-SAM Corridor. The following decision was formulated in that sense:

Decision SAT18/01: LHD

That:

EUR/SAM Corridor ACCs to continue sending LHD reports to SATMA on a monthly basis, from 1st to 15th of each month.

2.3 Follow up of the AORRA airspace implementation.

Operational Status of the AORRA Area

2.3.1 The meeting took with great interest, cognition of the content of an information paper presented by IATA commending the collaboration and cooperation of all stakeholders involved in the AORRA project as a model for all global ATM environments to follow. The paper reported also that more than 40 stakeholders, including Air Navigation Service Providers, IATA, ICAO, CANSO, ASECNA, Delta Air Lines and Emirates Airline worked together since 2009 to introduce today's dynamic routes concept. So, establishing the AORRA airspace for crossing the South Atlantic Oceanic airspace, in conjunction with the iFLEX project, has resulted in operational benefits that see time, fuel and CO2 savings as well as safety enhancements. It has also developed the concept of air traffic management (ATM) looking at strategic objectives to help reduce emissions and enhance flight efficiency and safety.

Implementation of Additional Exit/Entry Waypoints to increase Flexibility in the AORRA Airspace in the North Atlantic Airspace

2.3.2 While considering a request emanating from IATA, the meeting was reminded of the successful implementation on 21st December 2006 of the Atlantic Ocean Random Routing RNAV Area (AORRA) and the concept of filing and flying 'User-preferred Trajectories' in remote and oceanic airspaces, supported by the availability of relevant volumes of 'random-route' airspaces..

2.3.3 Initially, a limited number of existing waypoints were used for entry and exit to/from the AORRA. Additional points were later added on to provide more flexibility and increase the number of transitions to/from continental airspace. The last improvement was in 2012, where the AORRA airspace moved from 0° to 4°N.

2.3.4 IATA proposed additional entry/exit waypoints in order to provide operators from North America to West Africa and vice-versa with more flexibility towards a common goal of building seamless flight trajectories that are optimized for upper wind patterns and significant weather avoidance.

2.3.5 Further to consideration and discussion by all ACCs concerned, in particular with regard to safety assessment related aspects, the meeting agreed to the proposal and adopted the following conclusions:

Conclusion SAT18/02: Additional Waypoints to increase flexibility between West Africa and North America.

That:

- a. **The meeting agreed on the principle of the implementation of the proposed new waypoints from IATA at **Appendix C (part I)** to this report.**
- b. **All concerned ACCs to discuss internally the feasibility of this implementation, target effective AIRAC date 14 November 2013. States to send to IATA, ICAO secretariat in copy, a response by 15 October 2013**

Implementation of additional waypoints to optimize operations in the EUR/SAM Corridor

2.3.6 Based on feedback from the airlines indicating that computerized flight planning and dispatch systems may determine minimum cost routes to UK and Northern Europe flying from South America, IATA proposed the creation of three additional waypoints on the west side of the EUR/SAM corridor in order to provide operators suitable flight planning options between the SAM and Northern Europe from MOVGA position.

2.3.7 The introduction of these three new waypoints will result in the following benefits:

- Reduction of carbon footprint due to CO₂ emissions.
- Reduced flight times due to optimized trajectories.
- Decreased fuel consumption.
- Additional capacity to the EUR/SAM corridor.
- Increased flight planning options and severe weather avoidance

2.3.8 The meeting, while supporting the objectives of the proposal, was of the view that the issue should be soundly discussed between concerned ACCs before implementation. The meeting therefore formulated the following conclusion:

Conclusion SAT18/03: Additional waypoints to optimize Operations in the EUR/SAM Corridor

That:

Concerned ACCs (Dakar, Canarias, Lisbon, Santa Maria, Sal) to discuss internally the feasibility of the implementation of new waypoints proposed in the paper (Appendix C, part II**)**

2.4. ATS Contingency planning

2.4.1 The meeting recalled the need for the development and implementation of a commonly agreed contingency plan for the SAT Area.

2.4.2 In this regard it was recalled that within the framework of the implementation of Conclusions of SAT meetings, a draft *Contingency plan for the SAT Area*, developed by South Africa has been circulated to SAT members since two years.

2.4.3 The meeting urged SAT Member States/FIRs to study the draft contingency Plan, and submit comments to Mr. Johnny Smit (South Africa) who will compile the feedback and submit to SAT/19 for review and adoption. The following conclusion was formulated by the meeting in that sens:

Conclusion SAT18/04: Contingency Planning

That:

SAT States to review the Contingency Plan, presented in SAT17 by South Africa, and to send comments to JohnnyS@atns.co.za by 30th September 2013. To this regard, States also to notify if no additional comments.

2.5. Any other ATM business

Ascension Island FHAW/ASI and its criticality to airline operations

2.5.1 The meeting was seized with a paper presented by IATA on the use of Ascension Island as an Enroute alternate in accordance with regulatory requirements.

2.5.2 The paper demonstrated the importance of Ascension Island for flights operating across the South Atlantic between Africa and South America, with regard to the nomination of an Enroute alternate.

2.5.3 It was however highlighted that operators are facing the following main challenges when selecting suitable Enroute alternates, in particular concerning the Ascension Island:

- *Validity of TAFs:* Flights legs across the South Atlantic can be up to 15 hours. With Flight Plans produced by dispatchers as much as 4 hours before departure times, TAFs with validity of only 24 hours can be a challenge for operators. Airlines can only nominate an airport as suitable to use for an operation if there is a valid TAF. It is therefore essential that TAF validity is not left to expire and that the validity is far enough in to the future to allow for ultra-long-haul planning. Amendment 74 to ICAO Annex 3 contains provisions for MET authorities to issue TAFs with a validity of up to 30 hours to meet the flight planning needs of ultra-long-haul flights.
- *Access / availability of valid airport data:* In order to carry out safe operations at any airport the most up to date information concerning the airport must be readily available to all stakeholders. Access to this information is sometimes limited at military airports. For example, NOTAMS may give reference to the DoD website that certain stakeholders are unauthorised to access.

2.5.4 The meeting expressed its support to the operators in this context. Yet, the Ascension Island being in the area of accreditation of the ICAO SAM Lima Office, the meeting deemed necessary to involve the said office in the resolution of the issue. Hence the following conclusion:

Conclusion SAT18/05: Ascension Island FHAW/ASI and its criticality to airline operations

That:

The Dakar ICAO secretariat to coordinate with Lima ICAO office in order to:

- **Publish the 30 hours TAFs for FHAW/ASI.**
- **Determine how operationally important data concerning FHAW/ASI can be provided to all stakeholders to ensure safe operations.**

Co-ordination failures in the SAT region

2.5.5 Based on statistics gathered by ARMA (AFI RSVM Monitoring Agency), South Africa reported to the Sat/18 meeting on the issue of continued and increasing occurrences of coordination failures associated with the AFI region that are creating serious risks to aviation and RVSM safety.

2.5.6 In the analysis made by ARMA the following co-ordination failures have been identified:

- Incorrect estimates passed for reporting points resulting in aircraft arriving early or later than anticipated at the reporting point seriously affecting standard separation.
- No estimates passed at all with aircraft reporting on frequency uncoordinated
- Incorrect FLAS both coordinated and uncoordinated
- Incorrect flight levels coordinated with aircraft reporting at a waypoint at another level

2.5.7 The meeting noted with concern that the number of occurrences in the SAT area for the period of January to June 2013, is as high as 56, divided as follows:

- FAJO/FNLU: 36
- FAJO/SAEZ: 17

2.5.8 While recognizing that ARMA/TAG are processing all coordination failure events and dispatching to States/ACC's for remedial action, the meeting called upon the SAT States to be vigilant about this kind of events and to take remedial actions to address the associated risk.

2.5.9 In the same vein, all members of the SAT are urged to submit similar events to their respective Regional Monitoring Agencies for processing. In the event that a submission is made to the incorrect Regional Monitoring Agency it is understood that the event will be rerouted to the applicable RMA.

2.5.10 The meeting finally concluded that a concerted effort by all SAT States concerned is urgently sought in order to find solutions to the tendency. The solution might be found technically, procedurally or in the human interface.

2.5.11 The meeting formulated the following conclusion in this regard:

Conclusion SAT18/06: Co-ordination failures in the SAT region

That:

SAT member States to make a concerted effort to report all co-ordination failures to their respective RMA's for processing and to find technical, procedural or/and human interface solutions.

Agenda Item 3: *Communications, navigation and surveillance (CNS)* (by the CNS Working Group)

3.1 Follow up of SAT/17Conclusions pertaining to the CNS field

Follow up Conclusion 17/06: Implementation of the ATS/DS Circuit between Luanda and Atlántico

3.1.1 The meeting examined the status of implementation and the performance of AFS (AFTN and ATS/DS) within the SAT Region. It was noted that the ATS/DS voice circuit between Luanda and Atlántico is not yet implemented. The Secretariat reported on the coordination activities undertaken since the last SAT meeting and informed the meeting on the summary of the mission conducted with SAT Chairperson and Emirates in Luanda. The meeting was briefed on the draft Plan of Action for the implementation of the CAFSAT node of Luanda developed by ICAO and submitted to EANANA the Angola's Air Navigation Service Provider. Brazil reported on the ongoing project of modernization of the Recife CAFSAT node. The meeting applauded the initiative and encouraged Angola and Brazil to go forward for the implementation of the circuit. The following conclusion was formulated.

Conclusion 18/07: Implementation of the ATS/DS Circuit between Luanda and Atlántico

That:

As a matter of urgency ENANA (Angola);

- a) Formally endorse the draft Plan of Action for the implementation of the CAFSAT node of Luanda developed by the Secretariat and presented at **Appendix D****
- b) Take the appropriate actions to expedite the implementation of the Plan of Action in coordination with the project to modernize Recife CAFSAT node currently conducted by Brazil;**
- c) Convene, commencing no later than end of September 2013, monthly coordination e-meetings with Brazil and involving the Secretariat, SAT Chairperson, ISDEFE (formerly INSA) to agree on the adjustment on planning of the effective implementation of the ATS/DS circuit between Luanda and Recife before the end of December 2013.**

Follow up Conclusion 17/07: Trials for extension of ATS-N5 Voice switching protocol

3.1.2 The meeting discussed on trials on ATS Voice Switching systems. It was noted that the information on VCCs capability to support the N5 protocols was not available and the meeting encouraged SAT ATCs to pursue the investigation on their VCCs capability to handle the ATS voice N5 protocol and share the information with their concerned neighbouring centres in order to conduct trials. The following conclusion was formulated.

Conclusion 18/08: ATS Voice Switching systems

That:

SAT ATCs pursue the investigation on their VCCs capability to handle the ATS voice N5 protocol and share the information with their concerned neighboring centers in order to conduct trials.

Trials on ATS/DS VoIP

3.1.3 The meeting was presented with result of trials on telephony over IP (VoIP) undertaken by Morocco on his VSAT based Network. This emerging technology appeared to be flexible and able to solve the pending switching and signalling problem.

The meeting was reminded that VoIP is one ground/ground application supported by the Aeronautical telecommunication Network (ATN) as well as AIDC and AMHS.

States were encouraged to conduct coordinated trials on VoIP and report to the forthcoming SAT meetings. The following conclusion was formulated.

Conclusion 18/09: Trials on ATS/DS VoIP

That:

SAT ATCS conduct when possible trials on VoIP as component of the Aeronautical Network (ATN) Ground/Ground component, and report to SAT/19 meeting.

Follow up Decision 17/02: Operational Requirements for ADS Data Sharing

3.1.4 The meeting discussed on the interoperability of ATM automated systems within the SAT region. It was noted the benefit on the enhancement of air navigation safety that may be gained with the interconnectivity of systems.

The meeting encouraged States to consider the implementation of AIDC as enabler to the interoperability between ATM systems and accordingly conduct trials on AIDC with regard to the requirements of ATM Global Operational Concept (Doc. 9854) aiming to enhancing Air navigation safety and efficiency within the SAT region.

The following conclusion was formulated.

Conclusion 18/10: Implementation of AIDC

That:

SAT ATCs,

- d) Consider the implementation of AIDC as enabler to the interoperability between ATM systems;**
- e) Conduct trials on AIDC with regard to the requirements of ATM Global Operational Concept (Doc. 9854) aiming to enhancing Air navigation safety and efficiency within the SAT region.**

Follow up Conclusion 17/08: Implementation of AMHS within the SAT region

3.1.5 The meeting reviewed the status of implementation of AMHS in the SAT region and noted the good pace of implementation. The meeting noted that in order to ensure the interoperability between systems through the implementation of ATN within the SAT region the assessment on the current status of implementation of AMHS needed to be finalized.

The meeting encouraged SAT members to commence the interconnection of AMHS systems based on the strategies of implementation of the concerned regions (AFI, EUR and SAM) Regionals Air Navigation Plans.

The meeting recognized the effort deployed by ICAO to assist SAT members in the implementation of AMHS and encouraged ICAO to pursue this assistance through Regional seminars and workshops. The following conclusion was formulated.

Conclusion 18/11: Implementation of AMHS within the SAT region

That:

In order to ensure the interoperability between systems through the implementation of ATN within the SAT region,

- a) The SAT Secretariat finalize the assessment on the current status of implementation of AMHS;**
- b) SAT members commence the interconnection of AMHS systems based on the strategies of implementation of the AFI, EUR and SAM regionals Air Navigation Plans;**
- c) ICAO pursue the assistance to SAT members in the implementation of AMHS through Regional seminars and workshops.**

3.2 Review of AFS Performance

3.2.1 The meeting examined the performance of AFS as recorded by the secretariat. It was reported to the meeting the establishment by CNMC/3 of a specialized study group tasked to finalize the methodology and model of automation of AFS Performance.

The meeting encouraged States to undertake the automation of the collection of AFS performance in accordance with the model, methodology and technical guidance developed by the specialized study group established by CNMC/3. The following conclusion was formulated.

Conclusion 18/12: Automation of the collection of AFS Performance

That:

SAT members undertake the automation of the collection of AFS performance in accordance with the model, methodology and technical guidance developed by the specialized study group established by CNMC/3.

3.2.2 The meeting discussed the issue related to the missing Flight Plans and agreed that this issue is a hurdle to a safe interoperability of ATM automated systems and urgently requires remedial action.

ASECNA reported on a methodology of assessment and monitoring of mission flight plans she is currently conducting with remarkable reduction of missing Flight Plan.

The meeting applauded this initiative and decided to adopt the procedure for the investigation on missing flight plans developed by ASECNA. The following decision was formulated.

Decision 18/02: Procedure for the investigation missing Flight Plans

That:

The procedure for the investigation on missing flight plans developed by ASECNA is adopted as attached in **Appendix E**

3.2.3 The meeting encouraged SAT members to establish local missing Flight Plans Investigation Working Groups involving all stakeholders (ATCs, AIM, COM, Maintenance personnel...) in order to investigate on missing Flight Plans and take the adequate mitigation actions. The following decision was formulated

Decision 18/03: Establishment of local Missing Flight Plan Investigation Working Groups

That:

SAT members establish local missing Flight Plans Investigation Working Groups involving all stakeholders (ATCs, AIM, COM, Maintenance personnel...) in order to investigate on missing Flight Plans and take the adequate mitigation actions

3.2.3 ASECNA was invited to circulate the adopted procedure of investigation on missing Flight Plans and the example of corrective actions taken to minimize the pace of missing flight plans;

The meeting encouraged SAT ATCs to conduct with all stake holders (IATA, Airlines, ANSPs...) daily detailed investigation on missing Flight Plans based on this procedure and report quaternary to SAT Chairperson . The following conclusion was formulated.

Conclusion 18/13: Investigation on Missing Flight Plans

That:

- c) **ASECNA circulate the adopted procedure of investigation on missing Flight Plans and the example of corrective actions taken to minimize the pace of missing flight plans;**
- d) **Based on this procedure SAT ATCs conduct with all stake holders (IATA, Airlines, ANSPs...) daily detailed investigation on missing Flight Plans and report quaternary to SAT Chairperson.**

Agenda Item 4: Communications, navigation and surveillance / Air traffic management (CNS/ATM) Systems (Plenary session)

4.1. Harmonization of ADS-C/CPDLC programmes

Report of the CNMC/3 meeting

4.1.1 Under this agenda item the meeting reviewed the report of the third meeting of the CAFSAT Network Management Committee (CMC/3) held in Dakar from 15 to 16 July 2013.

The rapporteur of CNMC/3 presented the seven (7) conclusions and the four (4) decision adopted by the third CNMC meeting.

The meeting applauded these conclusions and decisions and approved the draft amended term of reference and Future work programme.

The following decision was formulated:

Decision SAT 18/04: Adoption of the CNMC/3 Report

That,

The SAT members approve the report on the 3rd CNMC meeting, its conclusions and decisions as presented at **Appendix F to this report.**

Report of the SATFIT/8 meeting

4.1.1 Under this agenda item, the meeting reviewed the report of the Eighth meeting of the FANS 1/A Interoperability Team (SAT FIT 8) held in Dakar, Senegal, 15-16 July 2013. The Rapporteur of the SATFIT presented the seven (7) conclusions and three (3) decisions adopted by the Eighth meeting of the FANS 1/A Interoperability Team, and the amendments made to the TORs and Work Programme of the FIT. The meeting agreed to the conclusions and decisions of the SAT FIT/8 meeting and the amended TORs and work programme . Hence the following decision:

Decision SAT 18/05: Adoption of SAT/FIT/8 Report and amendments to the SATFIT TORs and work programme

That,

The SAT members approve the report of the SATFIT/8 meeting, its conclusions and decisions, the amendments to the SATFIT TORs and work programme, as presented to SAT/18 meeting.

4.2. RNP4 in the EURSAM corridor

4.2.1 As tasked by the SAT group (ref. conclusion SAT17/11), SATMA continued the study on the implementation of RNP4 in the EUR/SAM corridor and presented the results to the meeting.

4.2.2 It was highlighted that:

- Due to the lack of a global database with FANS 1/A capabilities in EUR/SAM Corridor, the unique data collected by SATMA has been the data reported by Aena that shows data relative to the performance and use of FANS services for year 2012, concerning aircraft flying in the UIR Canaries from/to the EUR/SAM Corridor
- Approximately **60%** out of the total flights within EUR/SAM Corridor * are FANS equipped flights.
- Almost every equipped flight connected to SACCAN (**95%**).

- The majority of logged-on flights exchanged CPDLC information (95%).
- Trend of figures is kept since 2010

4.2.3 Noting that ADS-C/CPDLC ground systems are fully operational in the EUR/SAM corridor, and assuming that any implementation plan of RN4 in the EUR/SAM corridor should be established in close coordination with NAT region, SATMA proposed the following roadmap:

I. EUR/SAM Corridor Short Term Plan - Data Link Mandate

This data link mandate would be implemented during 2015, with all aircraft operating in corridor between FL330 to FL390 inclusive, being required to be fitted with and using CPDLC and ADS-C equipment. This measure would have the following effects:

- *Optimum flight level assignment to equipped and connected aircrafts.*
- *Reduced minimum longitudinal and lateral separation of 50NM based on RNP 10 and use of ADS-C and CPDLC from FL330 to FL390.*

This plan would require a previous analysis, including its respective CRM, trials and consolidation of operation.

II. EUR/SAM Corridor Long Term PBN implementation plan

This PBN implementation plan should consist of:

- *RNP 10 and RNP 4 differentiated airspace structure:*
 - *RNP 4 airspace from FL360 to FL390 based on ADS-C and CPDLC compliance, reduced lateral and longitudinal separation to 30NM and an extended set of new RNP 4 airways;*
 - *RNP 10 airspace from FL330 to FL350 based on ADS-C and CPDLC compliance, reduced lateral and longitudinal separation to 50NM and the existing set of airways;*
 - *RNP 10 airspace bellow FL330 with no ADS-C and CPDLC compliance, lateral and longitudinal separation of 80NM and the existing set of airways.*
- *A full implementation of this plan would be accomplished during 2020.*

This plan allows to have reduced separation and optimum performance for better equipped aircrafts, and it is compatible with the operation in the EUR/SAM corridor for worse equipped aircraft. Thus, there would be three different degrees of performance according to the “best equipped best served” statement.

This plan would require a previous analysis, including its respective CRM, an agreed roadmap, trials and consolidation of operation.

III. Common tasks

The previous plans must be completed with:

- a. *The promotion of real implementation of Central FANS I/A Reporting Agency (CFRA). Note that nowadays there are many technical and operative issues related to FANS I/A and a lack of global data: aircraft capabilities, incidents, etc.*

- b. *The definition of an agreed and consolidated roadmap of improvements for EUR/SAM Corridor.*

To encourage operators to take the necessary steps to obtain RNP 4 approvals for suitably equipped aircrafts in their fleets.

4.2.4 The SAT group congratulated Spain for the good work done.

4.2.5 The meeting discussed the tentative roadmap and the general view of the participants was that the implementation of RNP4 in the EUR/SAM corridor could be achieved earlier than proposed. Moreover, the meeting reckoned that a clear definition of the responsibilities of various stakeholders (operators, ANSPs, States ...), along with milestones and timelines, was lacking in this study. In particular, the question of conducting the required pre-implementation safety assessment was raised and discussed extensively.

4.2.6 The meeting finally formulated the following conclusion:

Conclusion SAT18/14: Implementation of RNP 4 in the EUR/SAM corridor

That:

- 3. SATMA consolidate the study on the implementation of RNP4 in the EUR/SAM corridor and establish an implementation work plan describing:**
 - a. The responsibilities and tasks of all stakeholders (ANSPs, States, Operators)**
 - b. Milestones and corresponding timelines**
 - c. Ways and means to conduct the required pre-implementation safety assessment**

- 4. SATMA will contact States, ANSPs and IATA to compile data and information required.**

Agenda Item 5: Adoption of the conclusions/decisions of the SAT/18 meeting (Plenary session)

Under this agenda item, which was considered lastly, the meeting reviewed and adopted its conclusions and decisions. However, it was agreed that the draft report, including the draft conclusions/decisions will be circulated to all participants, for consideration, before finalization.

Agenda Item 6: Future work programme

The meeting reviewed and amended the Terms of Reference and Work Programme of the SAT Group (ATM/WG, IAS/SG, CNS/WG) as presented in **Appendix G** to this report;

The following decision was formulated:

Decision 18/06: TORs and work programmes of the SAT Group

That,

The TORs and work programmes of the SAT Group are amended as shown at **Appendix G to this report**

Agenda Item 7: Any other business (Plenary)

Status of the SAT Group

7.1 It was recognized that, though the SAT Group and its activities are “informal” in terms of ICAO

active bodies and meetings, the Group has successfully and timely realized many implementation achievements such as RSVM in the EUR/SAM corridor, AORRA, IFLEX etc..., which This is why some SAT members are proposing that the status of the SAT Group be upgraded somehow, which will permit to more commit SAT States with regard to their participation to the meetings and to the implementation of the SAT conclusions and decisions, hence enhance the general performance of the Group. However, taking into account the various parties involved, among which the three ICAO AFI, EUR/NAT and SAM regions, the meeting was of the view that this should be discussed and coordinated at a higher level. In that sense, as far as the AFI region is concerned, the Secretariat informed the meeting that it would bring this issue to the level of APIRG, for more in-depth analysis, and to have decision taken thereon;

Participation of SAM States to SAT Meetings

7.2 The meeting noted the low pace of participation and/or the continued absence of some SAM ACCs to the SAT Group meetings although these centres are fully concerned in the resolution of safety issues within the SAT area. The meeting encouraged the centres concerned to endeavour to regularly attend the future SAT meetings.

The following conclusion was formulated in that sense:

Conclusion 18/15: Participation of Trinidad & Tobago, Argentina, Uruguay & French Guyana to SAT Meetings

That:

As a matter of coordination efficiency Trinidad & Tobago, Argentina, Uruguay & French Guyana endeavour to regularly attend the SAT meetings

Dates and venue of SAT/19 meeting

7.3 The meeting recalled that, in accordance with the principle of rotation between AFI, EUR/NAT and SAM regions for the hosting of the SAT meetings, the 2014 events should be convened in the SAM region. However any SAT member State, if it so wishes, may offer to host these meetings. In this regard, the secretariat will coordinate with the ICAO Lima office and all SAT group members to determine the venue and the dates of the next year's meetings . SAT members will be timely informed of the final agreed date and venue for the 2014 SAT/19 meeting.

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Appendix B

Status of Conclusions and Decisions related to SAT/17 Meeting

Conclusions and Decisions	Implementation Status	Remarks
<p><u>Decision SAT17/01:</u> EURSAM corridor Collision Risk Assessment</p> <p>That: SAT States provide SATMA with the air traffic data for the first half of 2011 by end of June 2012, and the data for the second half of 2011 as soon as possible.</p>	ongoing	Superseded by Conclusion SAT18/01
<p><u>Conclusion SAT17/01:</u> LHD</p> <p>That:</p> <ol style="list-style-type: none"> a. SATMA, Brazil, Cape Verde, Senegal and Spain, work on measures to decrease amount of LHDs. b. Identify measures to be implemented by amending agreements affecting those four States c. SAT ACCs, aircraft operators and adjacent RMA continue reinforcing safety culture by reporting and analyzing the LHD d. 	ongoing	Superseded by decision SAT18/01
<p><u>Conclusion SAT17/02:</u> Extension of AORRA as per Conclusion SAT16/03</p> <p>That: Abidjan ACC and Accra ACC</p> <ol style="list-style-type: none"> a. Implement as agreed, the extension of AORRA air space to 04° North, at effective AIRAC 20 SEP 2012 with publication date AIRAC 26 July 2012. b. Fully coordinate with Roberts FIR prior implementation 	Implemented	
<p><u>Conclusion SAT17/03:</u> Implementation of ADS-C/CPDLC in the AORRA Space</p> <p>That: In order to improve safety and enhance ATC operations, IATA encourage aircraft operators to make use of ADS-C/CPDLC and promote aircraft equipage.</p>	Continuous	
<p><u>Conclusion 17/04:</u> Implementation of the ATS/DS Circuit between Luanda and Atlantico</p> <p>That: As a matter of urgency;</p> <ol style="list-style-type: none"> a) Angola confirm to SAT members the schedule within which it intends to implement the CAFSAT node of Luanda taking into consideration the project of modernization of Recife CAFSAT node planned by Brazil; b) Angola and Brazil convene under ICAO auspices, and no later than end of September 2012, a coordination meeting to agree on a planning of the effective implementation of the ATS/DS circuit between Luanda and Recife before the end of June 2013 	ongoing	<p>Teleconference held between Atlántico, Luanda, IFEDES (INSA) and secretariat</p> <p>Luanda station under purchasing process</p> <p>Angola and Brazil to update on the current situation</p>

Appendix B

Status of Conclusions and Decisions related to SAT/17 Meeting

<p><u>Conclusion 17/05</u> Trials for extension of ATS-N5 Voice switching protocol That: SAT States pursue the trials on ATS-N5 Voice switching protocol based on the test bed developed by Spain and report to SAT/18.</p>	Still valid	States to report
<p><u>Decision 17/02:</u> Operational Requirements for ADS Data Sharing That: The Terms of Reference and work programme of the CFRA be reviewed to include the study on the operational requirements for ADS-C Data Sharing.</p>	Still valid	
<p><u>Conclusion 17/06</u> Implementation of AMHS within the SAT region That: In order to ensure a coordinated AMHS interconnection;</p> <p>a) ICAO Regional Office of Dakar develop and circulates between SAT members a template on the current status of implementation of AMHS; b) SAT members report on the future development of the ongoing and/or planned project for the implementation of AMHS; c) ICAO pursue the assistance to SAT members in the implementation of AMHS through Regional seminars and workshops.</p>	ongoing	Template developed and circulated Collection of information from States on going
<p><u>Conclusion 17/07:</u> Trials on AMHS systems That: When implementing AMHS systems SAT members take the necessary actions to conduct trials with their neighboring centers through Memorandum of Understandings (MoU) as called upon by SAT/16 conclusion 16/12.</p>	Still valid	
<p><u>Decision 17/03:</u> Performance Data Collection Form That: That the Performance Data Collection Form adopted by APIRG/18 meeting and presented in Appendix C to this report be used by SAT members to assess the operational and technical performance of AFS.</p>	Still valid	
<p><u>Conclusion 17/08:</u> Development of a consolidated procedure for the analysis of missing Flight Plans That: In accordance with the statement of conclusion SAT/16/15, ASECNA circulate by the end of May 2012, the draft procedure amongst SAT members for consolidation and assessment of the missing flight plans to be reported to SAT/18</p>	Still valid	ASECNA to report

Appendix B

Status of Conclusions and Decisions related to SAT/17 Meeting

<p>Conclusion 17/09: ATS voice circuits implementation by double hoop satellite link through the REDDIG, CAFSAT and AFISNET networks That:</p> <p>a) Argentina, Brazil, French Guyana, Santa Maria, Senegal, South Africa, Trinidad & Tobago, Uruguay and Cote d'Ivoire confirm to the respective ICAO regional offices by the end of September 2012 their plan to implement ATS voice trials using a double hoop satellite link through the REDDIG, CAFSAT and AFISNET networks following the draft Action Plan developed by SAT/16 (Appendix D to SAT/16 report), in order to complete the pending direct circuit implementation between CAR /SAM, AFI and NAT.</p> <p>b) AFI SAM and NAT ANPs to be amended accordingly</p>	<p>Still valid</p>	<p>Concerned parties to report</p>
<p>Decision SAT17/04: Nomination of contact persons for the joint technical team for CAFSAT evaluation and re-engineering. That: SAT concerned members communicate to Spain (Team Leader) the name and the title of their designated contact person for the joint technical team for CAFSAT evaluation and re-engineering no later than end of April 2012</p>	<p>Still valid</p>	<p>Organization Lead to be reconsidered</p>
<p>Decision SAT17/05: CAFSAT Reengineering Roadmap and Reference Document That:</p> <p>a) The CAFSAT Reengineering schedule and its Reference Working Document developed by Spain are approved as presented to SAT states.</p> <p>b) CNMC members follow up and provided Spain with the adequate additional information for the development of the project</p>	<p>Still valid</p>	
<p>Decision SAT17/06: Holding of CNMC meetings That: In order to ensure coordination and optimize resources, CNMC and SAT/FIT meetings are held at the same venue and dates with merged sessions if necessary.</p>	<p>Implemented</p>	
<p>Conclusion SAT17/10: Participation of SAT members to the meetings of the Task Force on an integrated AFI Aeronautical VSAT Networks That: SAT concerned members namely Angola, Cape Verde, Cote d'Ivoire, Ghana, Mauritania, Spain, Senegal, South Africa, Roberts endeavor to regularly participate in the meetings of the Task Force on an integrated AFI Aeronautical VSAT Networks aiming to harmonize the implementation of a robust satellite based backbone network for the provision of ATN</p>	<p>Implemented</p>	

Appendix B

Status of Conclusions and Decisions related to SAT/17 Meeting

<p>components and other CNS services.</p>		
<p><u>Decision SAT 17/07: Adoption of SAT/FIT/7 Report</u></p> <p>That, The SAT/FIT/7 Report and its conclusions are approved as presented to SAT/17Meeting.</p>	<p>Implemented</p>	
<p><u>Conclusion SAT17/11: Implementation of RNP 4</u></p> <p>That:</p> <p>a. SATMA and SAT States initiate study for a mandatory target date for aircraft FANS equipage on the routes in the corridor in close coordination with NAT region.</p> <p>b. IATA assist with the data.</p>	<p>ongoing</p>	<p>Superseded by Conclusion SAT18/14</p>
<p><u>Conclusion SAT17/12: SATISFIED Project</u></p> <p>That; Spain introduce strategic partnership to reduce emission in the EUR/SAM Corridor to improve energy efficiency through the development and the implementation of environmental friendly procedures.</p>	<p>ongoing</p>	
<p><u>Decision 17/08: work programmes of SAT ATM & CNS/WGs</u></p> <p>That, The work programmes of SAT ATM & CNS/WGs are amended as shown at Appendix x to this report</p>	<p>Implemented</p>	
<p><u>Conclusion 17/13: Participation of Rochambeau and Piarco to SAT Meetings</u></p> <p>That:</p> <p>As a matter of coordination efficiency Rochambeau and Piarco ACCs endeavour to regularly attend the SAT meetings</p>	<p>Continuous</p>	<p>Superseded by Conclusion SAT18/15</p>

Appendix C - I

Additional Waypoints requested by IATA

FIRs Boundary	Latitude	Longitude
Dakar/Sal	N18° 40.0'	W 020° 00.0'
	N15° 10.4'	W 029° 32.5'
	N15° 27.4'	W 030° 41.6'
	N15° 43.5'	W 031° 48.3'
	N16° 16.5'	W 034° 10.0'
Dakar/Piarco	N16° 30.0'	W 037° 30.0'
	N15° 30.0'	W 037° 30.0'
	N14° 30.0'	W 037° 30.0'
	N13° 40.0'	W 037° 30.0'
Dakar/Cayenne	N 12° 31.8'	W 037° 04.6'
	N 10° 46.8'	W 036° 19.1'
	N 08° 50.2'	W 035° 29.6'
Dakar/Canarias	N19° 22.9'	W018° 35.6'
	N20° 12.1'	W017° 42.3'
Sal/Canarias	N20° 05.7'	W020° 06.8'

Appendix C - II

Additional Waypoints in the EUR-SAM Corridor

FIRs Boundary	Latitude	Longitude
Sal/Dakar	N 15°27'24.00"	W 30°41'36.00"*
Sal/Canarias	N 24°00'00.00"	W 25°00'00.00"
Santa Maria/Canarias	N 30°00'00.00"	W 20°45'00.00"

Appendix D

Draft Plan of Action for the CAFSAT VSAT Station Implementation Project in Luanda, Angola

I- Scope of the Project

I-1 Objectives of the Project

The Angola Air Navigation Provider ENANA is engaged in the implementation of a CCAFSAT VSAT Station in the Luanda.

I-2 Consistency of the project

The project consists on the implementation of C-Band VSAT in Luanda in order to ensure the ATS/DS voice circuit between Luanda and Recife. This circuit aims to provide coordination capability between Air traffic controllers.

I-3 Expected benefit

- Surveillance coverage through ADS-C beyond SSR coverage to remote continental and oceanic airspace
- Improved safety reduced incidents/accidents risks, increased access, equity and capacity
- Availability of and improved Communication Service through ATS/DS voice between Atlántico and Luanda ACCs
- Improved situational awareness with ability to ensure the predictability and Efficiency,
- Improved ATC ability to manage air traffic in remote iflex and AORRA airspace
- Reduced cases of unidentified aircraft
- Compliance with Global and AFI Regional requirements and SAT conclusions/decisions
- Global interoperability, participation to the ATM community
- Decreased workload for ATCOs

II- Status of Implementation of ADS-C/CPDLC in Luanda FIR

II-1 Current status

The contract between ENANA and INSA is signed but is to be split into two sub contract in order to fit with Angola financial and legal regulations

- Antenna received from INSA and currently in Luanda harbor;
- ;

II-2 Short and Medium term planned Actions.

The activities during this period will be based on periodic consultation between the project management Team and the other stake holders including and not limited to ATCOs, AIS/AIM and Maintenance Personnel.

1. Formal establishment by the end of May 2013 of a Project Team aiming to conducting/following up the planned actions;
2. Factory acceptance scheduled to take place on Week 19 (06-12 May 2013);
3. Inform Atlántico (Brazil) on the evolving status of the project;

Appendix D

Draft Plan of Action for the CAFSAT VSAT Station Implementation Project in Luanda, Angola

4. Coordination teleconference including Brazil, SAT Chairperson, ICAO WACAF and the provider to be initiated by Angola before the end of May 2013
5. Shipping and transport of the base band and radiofrequency components in accordance with the schedule agreed with the provider
6. Taxes exemption and Custom clearance to be initiate prior to the arrival of the equipment
7. Site preparation
8. Installation with participation of technical team;
9. On-site training;
10. On site acceptance at the date agreed with the provider
11. Trials and operation

II-3 Long term planned Actions

The actions during this period should be formally and regularly notified to the ICAO (ESAF and WACAF Offices) IATA and SAT Chairman through the Regulator (CAA).

- Informing to airlines and SAT community on the establishment of the circuit;
- Operational assessment
- Established/Updated LoA with Atlantico;
- Sustainable maintenance policy Plan and Programme to be developed

II-4 Timeframe of the project

Appendix to be developed by the Project Manager, ENANA by the end of May 2013

III- Operational prerequisites

III-1 Operational Manual

Update of the Operational Manual including the contingency plan and taking into consideration the establishment of this direct link between Atlántico and Luanda;
Development of an appropriated maintenance measures subsequent to the contingency plan

III-2 Safety Risk Studies

Safety assessment and Development of the Safety Risks Document

III-3 Training of Technical Personnel

- Training policy
- Training Plan
- Training programme
- Training schedule
- Eventual maintenance contract

IV-Other suggested actions

Appendix D

Draft Plan of Action for the CAFSAT VSAT Station Implementation Project in Luanda, Angola

- Implementation of AIDC/OLDI between Atlantico and Luanda through the CAFSAT node
Familiarization visit to understand basic technical principles prior to the operation of the station with preference in a Portuguese speaking centres (SAL);
- Effective participation of ENANA at the SAT meeting (ICAOWACAF, Dakar, 15-19 July,2013) with a working Paper on the status of implementation of the project.

Appendix D

Draft Plan of Action for the CAFSAT VSAT Station Implementation Project in Luanda, Angola

Summary of the draft Plan of Actions for the Project of Implementation of CAFSAT VSAT Station in Luanda

Short and medium Term : 20 May -30 June 2013					
Order	Action	Responsible	Priority	Deadline	Status
1	Formal establishment Project Team aiming to conducting/following up the planned actions	CEO/Board	High	30 May 2013	Implemented
2	Factory acceptance	Project Team/INSA	High	06-09 May 2013	On going
3	Information to Atlântico (Brazil) on the evolving status of the project	Project Team	High	30 May 2013	
4	Coordination teleconference including Brazil, SAT Chairperson, ICAO WACAF and the provider to be initiated by Angola before the end of May 2013	Project Team	High	ASAP	
5	Development of a working/information Paper to report to CNM/3 and SAT 18	Project Team	High	15 June 2013	
6	Shipping and transport of the base band and radiofrequency components in accordance with the schedule agreed with the provider	INSA	High	TBD	
7	Taxes exemption and Custom clearance to be initiate prior to the arrival of the equipment	Logistic Division ENANA	High	TBD	
8	Site preparation	INSA/Technical Director	High	TBD	
9	Installation with participation of technical team	INSA/Project Team		TBD	
10	On-site training;	INSA	Medium	TBD	
11	On site acceptance at the date agreed with the provider	Technical Director	High	TBD	
12	Trials and operation	Operational Director	High	TBD	
Long Term: 1 st March 2014 and beyond					
Order	Action	Responsible	Priority	Deadline	Status
13	Informing to airlines and SAT community on the establishment of the circuit	Operational Director	Medium	TBD	
14	Operational assessment	Operational Director	High	TBD	
15	Established/Updated LoA with Atlantico	Operational Director	High	TBD	
16	Development of a sustainable maintenance policy Plan and Programme	Technical Director	High	30 December 2013	

TBD: To Be Determined based on the project schedule

ASAP: As Soon As Possible after coordination with stakeholder

Appendix E

Procedure for collection, analysis and processing Of missing flight plans

1. Object

The object of this procedure is to identify missing flight plans, examine, analyze the causes and propose corrective measures to overcome this problem.

2. Purpose

2.1. The issue of missing flight plans is being considered since a long time and several initiatives have been undertaken by ANSP and/or States in order to tackle this problem. A consolidated global procedure is necessary to properly improve globally the availability of the flight plans at regional and inter-regional level.

2.2. This procedure aims to provide provision which implementation will allow to mitigate and /or to minimize the impact of missing flight plans on the safety of the air navigation. It describes the approach to be followed by the various involved actors, for the monitoring missing flight plans.

2.3. It specifies the actions to be taken in a timely manner and the responsibility of all stakeholders in the collection and management of data on missing flight plans. It aims to reduce to an acceptable level the proportion of missing flight plans.

2.4. The dispositions of this procedure shall be applied from the date of its signature.

3. Scope

The implementation of this procedure will involve several entities from the ANSP, including Aerodrome (Local) control Unit, (En) Route control unit, Telecommunications Operations Unit, AIM Unit (Flight plan Processing Unit)

4. Definitions

- a) Missing flight plan: a flight plan is considered missing when it is not received by the Units involved in air traffic management, or on the AFTN terminal or on the support of any other approved system of air traffic management.
- b) Flight Plan Working Group (FPWG): a group whose role is to monitor and propose measures to mitigate the problem of missing flight plans. Its composition includes:
- Aerodrome control ;
 - En-route control ;
 - ATC, local training, AIM, Telecommunications Operations; units
 - Air Traffic Controller.

The sessions of the Working Group shall be chaired by the En-route control Manager or the aerodrome Manager

5. Collection of missing flight plans information

Appendix E

Procedure for collection, analysis and processing Of missing flight plans

- 5.1. The Head Unit ATC identifies and indicates by distinctive memo mentions in the section "Miscellaneous" or reverse of strips, to distinguish flights whose flight plans are either received, missing or received with a delay.
- 5.2. Then Air Traffic controllers on duty will note, clearly, these distinctive mentions in the strip during their service.
- 5.3. The distinctive mentions may be
 - « R » : for flights whose flight plans were received ;
 - « D » : for flights whose flight plans were received with delay
 - « N »: for flights whose flight plans were not received.
- 5.4. The of head Unit of ATC will collect daily the data on flight plans and fill a file of Excel designed for this purpose (see Annex).
- 5.5. AIM staff collects data on arrivals for flight plans not received and will fill each day, the file of Excel designed for this purpose.
- 5.6. The data collected by AIM or ATC units and AC can be compared in order to detect anomalies at least for flight on arrival.
- 5.7. In case of doubt on the recorded data, investigations will be conducted in collaboration with the Telecommunications Operation Unit.
- 5.8. Investigation will be conducted in coordination with the Operation of Telecommunications unit to define the hours of receipt of the plans received with delays.
- 5.9. Investigation will be conducted in coordination with the Telecommunications Operation unit to determine the plans received by the center but not addressed to the concerned control organism.

6. Analysis and processing of the missing flight plan

- 6.1. The file containing information on missing flight plans will be finalized at the latest 2nd of the following month by the head of ATC unit and transmitted to the en-route control Manager or to the aerodrome Manager.
- 6.2. The en-route control Manager or to the aerodrome Manager, from the Excel file, extract all relevant information that can be used to analyze and identify the various causes of the missing flight plans, including .
 - percentage of missing flight plans by type of traffic (arrivals over flight);
 - the missing flight plans by departure aerodrome(ANSP), airlines...
 - Percentage of flight plans received by the center but not routed correctly to the relevant organism, by origin, by airline.
 - any other relevant ratio for analysis.

Appendix E
Procedure for collection, analysis and processing Of missing flight plans

- 5.3. The en-route control Manager or to the aerodrome Manager convene the Flight Plan Working Group no later than 4th of the month to analyze and interpret the various results and ratios and provide corrective actions to mitigate the problem of missing flight plans.
- 5.4. The results of the Flight Plan Working Group will be forwarded to Headquarter no later than the 5th of the month by the en-route control or aerodrome Manager, for the appropriate actions.
- 5.5. The Flight Plan Working Group should follow the status of implementation of previous corrective actions and results of their application. Highlights should be reported in the report of the working group.

7. Implementation of the correctives action

The corrective actions will be implemented as soon as possible taking in account

- Coordination between relevant centers
- Coordination with the entities in charges of flight plan processing
- Coordination between ANSP
- Coordination with IATA or Airlines

Appendix F

Third Meeting of the Central Atlantic FIR Satellite Network (CAFSAT) Management Committee (CNMC/3, Dakar, Senegal, 15 -16 July 2013)

Draft Conclusions

Agenda Item 1: Review of the status of implementation of the Conclusion/Decision of the second meeting of CNMC (CNMC/2)

Conclusion 3/1: Implementation of the outstanding conclusions/decisions of CNMC/2

That,

SAT members implement the outstanding conclusions/decisions of CNMC/2 as presented in Appendix XX:

Agenda Item 2: Review of the performance of CAFSAT earth stations and the operational statistics of availability for supported links

Decision 3/2: Periodic report on CAFSAT Performance

That,

States pursue their effort in the collection of CAFSAT Performance under the Performance Data Collection Form (PDCF) format and report quaternary to CNMC current coordinator (ASECNA) with copy to the secretariat.

Conclusion 3/3: Automation of the collection of CAFSAT Performance

That,

- a) SAT members undertake the automation of the collection of CAFSAT performance based on the PDCF data collection format.*
- b) Portugal to share the software tool currently used to monitor AFS performance*

Decision 3/4: Establishment of a study Group for the Automation of CAFSAT Performance

That,

A CNMC specialized Study Group be established in order to develop by end of year 2013 technical requirements for the automation of CAFSAT Performance with Terms of Reference Composition and Work Programme presented in Appendix XX.

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

Conclusion 3/5: Participation of SAT members to the AFI Task Force on Integrated Regional telecommunication Infrastructure

That,

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Third Meeting of the Central Atlantic FIR Satellite Network (CAFSAT) Management Committee (CNMC/3, Dakar, Senegal, 15 -16 July 2013)

CNMC concerned members (Cape Verde, Cote d'Ivoire, Mauritania, Morocco, Senegal) endeavor to regularly attend the meeting of the AFI Task Force on Integrated Regional telecommunication Infrastructure

Agenda Item 4: Interconnection and interoperability of CAFSAT with its neighboring networks

Conclusion 3/6: Communication Requirement between Abidjan, Cayenne, Dakar, Piarco, Recife, Sal and Santa Maria

That;

- a) *In order to ensure a sustainable Aeronautical Fixed Service between ATCs, Atlántico (Brazil), Sal Fir (Cape Verde), Dakar Fir (Cote d'Ivoire, Senegal), Cayenne Fir (French Guyana), Santa Maria Fir (Portugal), and Piarco Fir (Trinidad & Tobago) envisage the establishment of direct links based on the existing satellite VSAT networks (AFISNET and CAFSAT) and conduct case by case technical analysis taking into consideration the cost effectiveness of the possible solutions.*
- b) *SAT Secretariat to coordinate technical meetings (including teleconferences and e-meetings) for collaborative decision making and report to next CNMC meeting.*

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

Conclusion 3/7: Support to ICAO position for WRC-15 and Protection of the C-Band operated by CAFSAT Network

That;

CNMC members support ICAO position for WRC-15 and take the appropriate actions aiming to protecting the C-Band operated by CAFSAT Network by:

- a) *Registering CAFSAT nodes in the ITU data base through their National Regulator of Telecommunication;*
- b) *Sensitizing their National Regulator of Telecommunication on international Civil Aviation requirements for spectrum;*
- c) *Promoting the ICAO contribution to the ITU-R Working Parties in preparation to WRC-15*

Agenda Item 6: CAFSAT modernization and re-engineering

Decision 3/8: Appointment of the Team Leader of the Joint Technical Team for CAFSAT Modernization and Re-engineering

That;

Appendix F

Third Meeting of the Central Atlantic FIR Satellite Network (CAFSAT) Management Committee (CNMC/3, Dakar, Senegal, 15 -16 July 2013)

Nav Portugal is appointed as Team Leader for the Joint Technical Team for CAFSAT Modernization and Re-engineering

Conclusion 3/9: Re-schedule of CAFSAT re-engineering

That;

CAFSAT modernization and re-engineering be rescheduled taking into consideration the recent progress development reported by CNMC members;

- a) The Team Leader in collaboration with the industry develop by end of September, a table aiming to facilitating the coordination of the re-engineering exercise;*
- b) The table will contain the planned actions with expected deadline and the components of the nodes upgrades*

Agenda Item 7: Review of the Terms of Reference and Work Programme of CNMC

Conclusion 3/10: Terms of Reference and Work Programme of CNMC

That;

The Terms of Reference and Work Programme of CNMC are adopted as presented in Appendix XX

Agenda Item 8: Review of the draft Conclusions/Decisions of CNMC/3 Meeting

Agenda Item 9: Any other business

Decision 3/11: Follow up of the outcome of the ICAO 12th Air Navigation Conference

That;

When conducting CAFSAT modernization, CNMC members consider the requirement of ICAO Aviation System Blocs Upgrades (ASBU) and the CNS Roadmap developed by ICAO 12th Air Navigation Conference

Appendix F

Third Meeting of the Central Atlantic FIR Satellite Network (CAFSAT) Management Committee (CNMC/3, Dakar, Senegal, 15 -16 July 2013)

<ul style="list-style-type: none"> Considering the evolutionary implementation of CNS/ATM systems in areas of routing AR1/HA1 and AR2/HA8 <i>as defined in the Global Air Navigation Plan (ICAO Doc 9750)</i>, the Task Force should explore ways and means to achieve further enhancements in ATM capacity and aeronautical telecommunications, and to implement CNS/ATM elements taking into consideration the timescales agreed for these areas of routing. It will be guided by the requirements identified in the AFI and CAR/SAM CNS/ATM Implementation Plans. <i>Note: The Task Force will adopt a pragmatic approach and may set up auxiliary bodies to carry out specific tasks, as necessary.</i> 		
WORK PROGRAMME		
TASK No.	SUBJECT	TARGET DATE
1.	Analyze ATM deficiencies and make proposals for their elimination.	Continuous
2.	Monitor pre-implementation/post-implementation safety assessments (as applicable) for RVSM and RNP operations in the South Atlantic, including adjacent areas.	<i>Continuous</i>
3.	Study and evaluate RVSM, RNP/RNAV procedures applicable in the AFI/CAR/SAM and EUR/SAM Interface areas.	Continuous
4.	Monitor flight plan availability and propose appropriate corrective measures.	Continuous
5.	Oversee FANS 1/A system performance monitoring to ensure that the system continues to meet safety and interoperability requirements and that operations and procedures are working as specified.	Continuous
6.	Carry out studies on the establishment of a central reporting agency (CRA) and related institutional issues	Completed
7.	Harmonize ADS-C/CPDLC programmes developed by SAT States/FIRs and analyze cost-benefit aspects related to their implementation.	Continuous
8.	Maintain and update ADS-C/CPDLC operational guidance material.	Continuous
9.	Conduct studies related to the implementation of the Global ATM Operational Concept and other enabling concepts within the SAT area.	Continuous
10.	Continue studies related to the extension of the AORRA airspace.	Continuous
11.	Monitor the implementation of the ICAO New Flight Plan in the SAT Region.	Completed
12.	Conduct studies related to the implementation of User Preferred Routes (UPR) in the SAT area	SAT19
<ul style="list-style-type: none"> Note: The ATM/WG should take appropriate action on pressing issues and submit its proposal to the SAT Group meeting. 		

Appendix F

Third Meeting of the Central Atlantic FIR Satellite Network (CAFSAT) Management Committee (CNMC/3, Dakar, Senegal, 15 -16 July 2013)

COMPOSITION
<ul style="list-style-type: none">• <i>The Task Force of multi-disciplinary nature shall comprise of experts from States responsible of FIRs in AFI and SAM routing areas AR1/AH2 and AR2/AH8 as defined in the Global Air Navigation Plan (ICAO Doc 9750), and experts from adjacent FIRs and international organizations.</i>• Rapporteur: Spain• <i>Tasks Nos. 5, 6, 7 and 8 are assigned to the SAT established FANS-1/A Interoperability Team (FIT) with South Africa as Team Leader.</i>• Working arrangements: <i>The ATM/WG should complete its work and submit its proposal to the SAT Group. The ATM/WG should work through electronic correspondence prior to meetings.</i>

Appendix G

TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE SAT ATM WORKING GROUP (ATM/WG)

TERMS OF REFERENCE, WORKING PROGRAMME AND COMPOSITION OF THE SAT STUDY GROUP ON THE IMPROVEMENT OF THE AIRSPACE STRUCTURE IN THE EUR/SAM CORRIDOR (IAS/SG)

<ul style="list-style-type: none"> To develop a strategy for the short-term, mid-term and long term for the implementation of a new airspace structure in the EUR/SAM Corridor with the end to improve the capacity and efficiency of the operations and to meet users needs. 		
WORK PROGRAMME		
TASK No.	SUBJECT	TARGET DATE
1.	Analyze the current operational situation within the EUR/SAM Corridor taking into account statistics and users needs.	Completed
2.	Explore ways and means to restructure the EUR/SAM Corridor airspace	Completed
3.	Develop a short term plan using the current separation standards based on RNP10, including the implementation of new ATS routes.	Completed
4.	Analyze the advantages of introducing unidirectional ATS routes.	Completed
5.	Study the feasibility of implementing RNP4, using ADS-C/CPDLC functionalities.	SAT/19
6.	Continue studies to implement a random routing area, using ADS/CPDLC functionalities.	SATContinuous
7.	Develop necessary cost benefit analysis for the different options.	SAT/19
8.	Establish means to develop the safety assessment for the different implementation options.	SAT/19
9.	Develop an action plan for the different implementation options.	SAT/19
COMPOSITION		
<ul style="list-style-type: none"> Brazil, Cape Verde, France, Portugal, Senegal, Spain, Trinidad and Tobago, United States, ASECNA and IATA. Rapporteur: Spain. 		
<ul style="list-style-type: none"> Working arrangements: The IAS/SG should take the appropriate action to complete its work and submit its proposals to the next meeting of the SAT Group. The IAS/SG should work through electronic correspondence prior to meetings. 		

Appendix G

TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE SAT ATM WORKING GROUP (ATM/WG)

COMPOSITION OF THE SAT CNS WORKING GROUP (CNS/WG)

<ul style="list-style-type: none"> • Considering the CAR/.SAM and AFI Air Navigation Plans, the SAT CNS/WG should explore ways and means of achieving further enhancements in ATM efficiency within in areas of routing AR1/HA1 AR-2/HA8 <i>as defined in the Global Air Navigation Plan (ICAO Doc 9750)</i>, by resorting to emerging technologies and, in particular, by taking advantage of rationalization, integration and harmonization of systems where appropriate. • Implementation of new systems should be sufficiently flexible to accommodate existing and future services in an evolutionary and cost-effective manner. • The associated institutional arrangements shall not inhibit competition among service providers complying with relevant ICAO Standards, Recommended Practices and Procedures. 		
WORK PROGRAMME		
TASK No.	SUBJECT	TARGET DATE
1	Analyze CNS deficiencies and make proposals for their elimination.	Continuous
2	Review the report of the CAFSAT Network Management Committee	Continuous
3	Undertake investigations on the lack of flight plans, including individual cases, with emphasis on the aeronautical fixed telecommunication network (links, switching centres, routing directory and transit time statistics).	Continuous
4	Carry studies and make proposals to achieve end-to-end interoperability of ATM applications, in accordance with the ATM global operational concept.	SAT/19
5	In accordance with CNMC conclusions and decisions evaluate the feasibility of using existing or emerging digital VSAT networks to support ATS data link applications in an ATN environment.	SAT/19
6	Considering the implementation time-frames in the AFI and SAM CNS/ATM implementation plans, address cost-benefit aspects for the use of CNS/ATM applications (as required).	Continuous
7	In coordination with SAT ATM/WG, share relevant technical aspects of different ADS/CPDLC Systems to be implemented by SAT States addressing issues regarding work methodology, procedures, data interchange, maintenance, etc.	SAT/19
8	Analyze all aspects related to the implementation of ATS-N5 protocol in the SAT area in accordance with ICAO guidance material contained in Annex 10 and Doc. 9804	SAT 19
COMPOSITION		
<ul style="list-style-type: none"> • The CNS/WG being of multi-disciplinary nature shall comprise of experts from States responsible of FIRs in the area concerned, experts from adjacent FIRs and international organizations and the aeronautical industry. • Rapporteur: Senegal. • Task Team leaders: ASECNA (Tasks. Nos.3 and 4), South Africa (Task No.7) • Working arrangements: The CNS/WG should complete its work and submit its proposal to the SAT. The CNS/WG should work through electronic correspondence prior to meetings. 		