



INTERNATIONAL CIVIL AVIATION ORGANISATION

AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP (APIRG)

AFI OPMET MANAGEMENT TASK FORCE (AFI OPMET MTF) SECOND MEETING (AFI OPMET MTF/2)

(Johannesburg, 6 - 7 September 2010)

Agenda Item 2 b): Assessment of the Implementation the AFI Meteorological Bulletin Exchange (AMBEX) scheme

IMPLEMENTATION OF THE AMBEX SCHEM BY RODB DAKAR

(Presented by Senegal)

SUMMARY

This note provides an update on the status of implementation of recommendations of APIRG /16 on Data Management in OPMET AFI (AFI / OPMET / MTF). Its target is to emphasize the status of communication means, the strength and the weakness of the AMBEX Exchange System on the Area of Dakar RODB responsibility.

1 INTRODUCTION

The 16th Regional Group of the AFI Planning and Implementation (APIRG/16) meeting noted that the system introduced in AFI AMBEX has generally given good results. Both Data bases OPMET (RODB) based in Dakar and Pretoria, on 12/66 decision and the **APIRG/12** and **15** conclusions are operational.

In order to improve the availability and quality of data OPMET, a working group created AFI sucked.

This group is composed by experts from the following states:

Algeria, Cameroon, Congo, Ethiopia, Egypt, Kenya, France, Madagascar, Morocco, Niger, Nigeria, Senegal (Reporter), South Africa, the United kingdom (UK) and ASECNA.

The program's working group is contained in Appendix L-1 Report APIRG/16.

The mandate of the group, is also in the report of the meeting APIRG/16.

2 DISCUSSION

2.1 Implementation of assistance to air navigation Means.

The Regional Telecommunication Hub (RTH) of Dakar has a MESSIR-COM and MESSIR- AFTN station, a SADIS 2G and a RODB, as means for exchanging OPMET data. Since June 2010, our main circuit with Toulouse, which was X.25, now works with FTP, which has improved the collection and transmission of OPMET data.

The links Dakar - Brazzaville, Dakar – Niamey and Dakar - Abidjan, are passed in June 2010 on V.24, Banjul-Dakar, Dakar -Libreville (not provided), were established in August 2010. To have a relatively high traffic between Pretoria and Dakar RODB, it is desirable to establish an AFTN, FTP connection or even between these two Centres.

2.2 Data OPMET Exchange between AFI Regions and EUR, MID AND ASIA.

Data exchange OPMET alphanumeric (METAR, SPECI, TAF, SIGMET, AIREP, AIRMET) are defined in three documents reference the ICAO, including:

Volume 6 (MET) of FASID (Document on the implementation of facilities and services in the Africa and Indian Ocean) is one of the supplements Air Navigation Plan;

The Guide SADIS users;

Manual AMBEX.

These exchanges are ensured through the AFTN and SADIS essentially. Adjunct to these two systems the SMT is used to convey the collective data OPMET national or regional.

Traditionally, the conditions for the exchange of data are based on METAR

Belonging to the same airfield FIR;

Membership of airfields adjacent FIR;

Two aerodromes separated by a flight duration rarely exceeding 2 H.

Increasingly, the need to exchange METAR are cast, which explains their gradual integration into the SADIS broadcast. Thus, the list of airfields in each State of which the METAR and SPECI is broadcasting in SADIS is contained in the "Guide for users SADIS"

The exchange of TAF is, in part, through the ICAO Manual AMBEX which is in its seventh edition, and includes three appendices detailing the various phases are:

The collection in the TCA (AOR);

The compilation of the group by the BCC (Centre Collection Bulletins);

The distribution of such group in the TCA in the AFI Region and to other ICAO regions: AFI, EUR, MID and ASIA accordance with Appendix E of the manual AMBEX 7th edition.

The principle of exchange between TAF AMBEX two airports is based on the number of flights operated per week which shall not be less than four (4). The exchange of TAF is also in the context of SADIS based on new additional needs expressed by the airlines are not met by the system AMBEX.

Thus the list of airfields in each Contracting State of which the TAF, is to distribute in SADIS is contained in the "Guide for users of the SADIS. Since the passage of the validity of the TAF to 30 hours in November 2008, it is noted that some airfields in the PDO are still remained at 24 hours. For those concerned ASECNA, all aerodromes have switched except, Bissau (main airport) and secondary airports of member states.

The classic exchange AIREP is provided by the regional collecting Centres of Brazzaville, Dakar and Niamey. They carry on compilation of collective and relay first to the NMC, in their area of responsibility on the GTS and AFTN (to WAFC London and Washington for aviation forecasts and RSMC).

The exchange of SIGMET messages is organized by the FASID Table MET 2A presents needs. Thus, it is noted that in the area ASECNA, it is prepared and issued by the Meteorological Watch Offices (MWO) corresponding to the Flight Information Centres (VIC). Thus the lists of recipients of SIGMET messages issued by the Centres involved (Antananarivo, Brazzaville, Dakar, Niamey and N'Djamena) to "Appendix A Guide for the preparation, dissemination and use of SIGMET" published of West and Central Africa bureau in Dakar of ICAO.

2.3 Deficiencies noted in the implementation of systems for exchanging OPMET data

As part of the OPMET exchange, the Meteorological Office of Dakar provides the following functions:
BCC: (TAF Centre collection), BCC (METAR Centre collection) and BCC (central collection of AIREP) within the ICAO AMBEX system;

SADIS two-way station is responsible for the collection and dissemination to the London WAFC alphanumeric OPMET data (METAR, SPECI, TAF, SIGMET, AIRMET, and cyclone warnings (CF), volcanic ash (VF) in West and Central Africa, Madagascar and Indian Ocean.

Under both programs, the following deficiencies were noted by the Centre of Dakar.

2.3.1 Statistics collection AIREP

The number of messages collected via the AIREP AMBEX system in the area is zero, despite the increasing number of flights and airlines operating in the area west and central Africa. No Centre of the zone (Bamako, Abidjan, Nouakchott, etc.) Does not collect and transmit AIREP to Dakar. Therefore, only messages with words like NIL text are retransmitted by the collection Centre AIREP (BCC) in Dakar.

2.3.2 Statistics on the METAR and TAF collection

2.3.2.1 System AMBEX Cases:

a) Responsibilities related to outgoing newsletters

Regarding the compilation and dissemination of ballots AMBEX IROG in Dakar, the BCC Dakar, Niamey and Brazzaville and Antananarivo, conducted their changes since April 15, 2010.

Thus, to Dakar

- **FTAO32**, includes the main aerodromes which TAF validity 30 hours;
- **FTAO39** for major airports, which are always 24 hours;
- **FTAO25** for secondary airfields that are 24 hours.

Brazzaville:

-**FTAM31** for 30 hours and **FTAM39 FTAM20** for 24 hours, required are received and forwarded to Toulouse and Rio de Janeiro.

In Niamey,

FTAO33 for 30 hours;

FTAO20 required, are received and forwarded to Toulouse and Rio of Janeiro, together **FTIO31, FTIO39 and FTIO20** of Indian Ocean and Madagascar.

In the BCC group Casablanca

(**SAMC31 GMMN**) messages from Las Palmas (**GCLP**) and Tenerife (**GCTS, GCXO**) **GCRR, GCFV, GCML GCHI** and **GCLA**) are received from the commissioning of MESSIR-COMM-MESSIR AFTN and SADIS2G.

All compilations (**FTMC31, and FTMC32 FTMC33**) requirements are received and retransmitted. It is the same for **FTAF31, FTAF32, and FTAF33 FTAF34** from Jeddah, Cairo, Tunis and Tripoli.

The collective BCC Johannesburg (**FTAP32 FAPRI**) required are received, while in Nairobi (**FTEA32 HKNC**) and Addis Ababa (**FTEA31 HAAB**) required, are received unevenly.

In the BCC group Niamey (**SAAO33 DRRN**), messages in Kano (**DNKN**) and Lagos (**DNMM**) required are received at a rate below **30%**. This is also valid for stations in Ghana and those of the FIR Roberts Field (**GLRB, GFLL** and **GUCY**).

The collective BCC Johannesburg (**SAAP32 FAPR**) required are normally received since 2007.

b) Responsibilities relating to Incoming Newsletters

TAF Bulletins **FTSA85, FTFR31, FTBX31, FTDL31, FTGR31, FTIY31, FTNL31, and FTSW31 FTUK31**, are required and forwarded to the NOC and BCC of area of responsibility of Dakar, and to Rio of Janeiro.

2.3.2.2 Cases of SADIS:

The required **METAR** of following Aerodromes are not received:

Angola: FNCA and FNHU
Chad: FTTD and FTTA;
D R Congo FZNA, FZIC, FZQA and FZWA;
Equatorial Guinea: FGBT;
Ghana: DGLE;
Guinea: GULB, GUNZ and GUXN;
Mauritania: GQPA, GQNK and GQNI;
Nigeria: DNCA, DNEN and DNIO.

The table below shows the percentages of availability of METAR and TAF for the first half of 2010 as indicative of the level RODB of Dakar.

The percentages are calculated on the basis of **4344 METAR** and **724 TAF** expected.

The percentage greater than or equal to **97%** is considered as the desired rate.

The following required **TAFs** are not received in Dakar BRDO:

Angola: FNCA and FNHU;
D R Congo FZNA, FZIC, FZQA and FZWA;
Ghana: DGSI;
Guinea: GULB, GUNZ and GUXN.

The Sao Tome and Principe (FPST) **TAFs** are received on an irregular basis.

Overall, the statistics collection OPMET level BRDO, show that:

- 1) The BCC Casablanca has a good collection rate (usually above **97%**);
- 2) The BCC Dakar, Niamey and Brazzaville Antananarivo, follow with more or less good percentage (between **80** and **97%**).

2.4 SIGMET

The SIGMET tests conducted by ICAO in 2008 and 2009 whose objective was to verify the reliability of telecommunications facilities and adherence to procedures of transmission of SIGMET, have generally gone well. Only the Centre of BRAZZAVILLE struggled during the second test for reasons not yet well known.

SIGMET messages written by Antananarivo which were not received are now in Dakar.

No SIGMET is prepared and forwarded from the FIR Roberts Field. This was confirmed by the Delegate of Liberia, the AFI OPMET MTF/1-WP/1 meeting held in Dakar from 19 to 20 October 2009. The main cause is the lack of equipment. For the FIR Kano, the situation remains the same, that is to say, the almost total absence of SIGMET messages from this Centre.

The few SIGMET messages disseminated by the Centres of Accra and Lagos to Accra FIR, FIR Lagos and Libya, are rarely written as indicated in Appendix 3 of ICAO, Which justifies the high number of messages sent for correction at Dakar RODB.

2.5 The Regional OPMET of Data Bank (RODB) of Dakar.

Established since June 2007, the RODB works satisfactorily. The equipment has two servers installed in the mechanical room and a supervisory position located in the room of the RTH. The regional bank has a web server hosted on the site of ASECNA, and accessible via the Internet at: <http://brdo.asecna.org/>.

The OPMET that are received by the bank, are METAR SPECI, TAF and SIGMET (storm tropical cyclone and volcanic ash, Tsunami). The annual statistics of SIGMET received Dakar Centre, show a lack in numbers, because **AVISIG** developed by CMP, which should serve to lock together are either not made, is often poorly transmitted.

The AFTN address of the Dakar RODB is: **GOOYYZYZ**.

The same difficulties related to lack of the control of operating procedures making that the supervision and correction of the messages are performed for **24** Hours.

The catalogue of Bulletins received and transmitted to the website can be found soon on the website of the ASECNA Representative in Senegal from this link: <http://www.asecnarep.com>

3 Action by the meeting AFI OPMET MTF / 2

In view of the foregoing, it is apparent that satisfactory results were obtained. Efforts must be concentrated on Roberts, Accra, Lagos, DR Congo and Luanda, FIRs in the sense of improved telecommunications facilities and training of technical human resources as well as the development and dissemination of OPMET data, especially SIGMET.

4 Conclusion

The meeting is invited to consider the contents of the note and make recommendations in order to improve OPMET data exchange between States of AFI Region and between this region and others namely Europe, America, Asia and the Pacific.

THANK YOU FOR YOUR ATTENTION