



International Civil Aviation Organization

**AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP
SIXTEENTH MEETING (APIRG/16)
(Kigali, Rwanda 19-23 November 2007)**

Agenda Item 4 : AFI regional Air Navigation, Planning and Implementation Issues

4.4 Aeronautical Meteorology:

Implementation status of OPMET Data Bank in Dakar, including effective operation date

(Presented by ASECNA)

SUMMARY

This paper is aimed at updating the meeting on the implementation status of the Dakar (Senegal) OPMET Data Bank

Action required from APIRG16 is in paragraph 3.

References

- APIRG Report 15
- MET/SG8 REPORT

1. BACKGROUND

1.1. APIRG decision No.12/66 and Conclusion number 15/89 recommended the establishment of Regional OPMET Data Bank (RODBs) in Dakar, Senegal, and in Pretoria, South Africa. The 8th Meeting of MET/SG held in Nairobi in June 2007 was briefed on the implementation status of the two Data Banks and their operations. The meeting acknowledged that the two RODBs had the needed capacity to carry out systematic monitoring of the availability and regularity of alphanumerical data. It was the view of the MET/SG/8 that control would be better carried out by the RODBs and that the AFI region would benefit from control processes of regular OPMET exchanges (Particularly METAR and TAF) developed by the EUR and ASIA/PAC regions. The said procedures include Performance Indicators (PIs) on conformity, availability and frequency of METAR and TAF information.

2. RODBs Dakar

2.1. The Dakar RODB acquired by ASECNA was installed in April 2007 at the premises of the Weather Service and trials and assessments were undertaken prior to actual operations. The local technical and operational teams have each undergone relevant training. The structure known as MESSIR-RODB has the following components :

- . Two MESSIR-RODB servers that operate in pilot/rescue mode
- . Two stations to oversee the technical and operational aspects of the RODB

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- . An Internet server (web server installed at the DMTI) to permit the RODB to be reached from any station on line

The local network ensures connection between the web server and MESSIR-RODB servers. The main MESSIR-RODB programme is user-friendly.

2.2 RODB is supplied with OPMET data by an AFTN and SMT commutation messages system and by a SADIS 2G working station through a files transfer system.

2.3 Expected products are alphanumeric OPMET (METAR, SPECI, TAF, SIGMET etc.) of all airfields planned in the footprint of the SADIS broadcast within the ICAO World Area Forecast System (SMPZ-WAFS). Users are all centres, airfields, permitted organisations that send requests and receive responses via the AFTN GTS or the Internet. The diagram at the Appendix depicts the RODB configuration.

2.4 The outcome of this operational assessment period – April to August 2007, is satisfactory. As a matter of fact, various users have sent many requests to RODB through the RSFTA (particularly the Center of Brazzaville, to a less extent, those of Bamako, Niamey, and Abidjan); through the GTS (the Dakar Center) and by the Internet, (the DEE, DMTI and the Dakar Regional Office of ICAO). All these requests were answered with or without all the requested data. Please note that the requested data which is not available at RODB Dakar, the request is automatically sent to European OPMET databanks (Brussels, Toulouse and Vienna), and also to RODB in Johannesburg, to meet the needs of all authorized users.

2.4 These positive results are the same for daily to monthly statistics provision on the availability of METAR, TAF etc., data to a long list of several hundreds of airfields. Detailed processes to interrogate the RODB are in the Appendix.

2. Action required by APIRG:

3.

The meeting is invited to :

- take note of information in this working paper
- amend access procedure into the Dakar RODB as are shown in the Appendix
- adopt the Decision 8/8 of MET/SG8 : Introduction, of Regional Databases OPMET (RODB) and of prescriptions governing SIGMET Information in the AMBEX Manual.

Appendix A**Dakar BDRO Configuration**

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APPENDIX B

**BASIC PROCEDURES FOR THE INTERROGATION OF DAKAR
REGIONAL OPMET DATA BANK**

1. INTRODUCTION:

1.1. Implemented in April 2007 and evaluated in operation during four months, the Dakar Regional OPMET Data Bank, named MESSIR-RODB, is now fully operational.

1.2. The alphanumeric information stored in MESSIR-RODB are derived from the rationalized AFTN circuits, the predetermined selective AFTN/CIDIN distribution supplemented by the use of the EUR OPMET data banks (located at Brussels, Toulouse and Vienna), the GTS circuits and the London WAFC SADIS broadcast.

1.3. The following types of alphanumeric OPMET information are stored in MESSIR-RODB for direct access by authorized users:

TT	Message Type
SA	METAR/SPECI

FC	9 HR TAF
FT	18/24 HR TAF
WS	SIGMET
WC	Tropical Cyclone SIGMET
WV	Volcanic Ash SIGMET
WA	Airmet
UA	Special AIREP
FV	Volcanic Ash Advisory
FK	Topical Cyclone Advisory

1.4. Three means are to be used to access the Dakar MESSIR-RODB:

- (a) AFTN Access: the address that must be used is **GOOYYZYZ**
- (b) GTS Access: the message type indicator (in the line heading) that must be used is T1T2A1A2ii = **BMRQ01** and the MESSIR-RODB indicator that must be used is CCCC = **GOOY**
- (c) Internet Access: RODB web server address that must be used is: <http://www.RODB-web/>
A **login** and a **password** are needed by the user. To be authorized the user has to send a request by letter at the following address:

**Monsieur le Représentant de l'ASECNA au Sénégal,
BP 8132 Aéroport Léopold**

**Sédar Senghor Dakar/Yoff, Sénégal.
Email: Senegalrep@asena.org
Fax (221) 338200600**

1.5. In order to be accepted by MESSIR-RODB, the request message must be contained within one list of text (69 characters), and its structure must be in agreement with the following format:

- (a) Identification by means of special request identifier placed at the beginning:

RQM/

- (b) Description by means of two possible types of coded groups, of the requested information:

TTCCCC ; TTAA

Where TT, CCCC and AA have their conventional ICAO and WMO meanings

- (c) End of message, identified by the equal sign

(=)

2. REQUEST/REPLY MESSAGE FORMAT

2.1. Request Messages

2.1.1. Through the AFTN:

Request messages shall follow the AFTN standard telecommunication procedures as define in Annex 10, volume II. The text part of the message shall be defined in the document.

The standard AFTN message start and end characters and alignment characters (SOH, STX and ETX for ITA-5 format or ZCZC and NNNN for cITA-2 format) have been omitted for clarity in the following examples

Request messages shall use the AFTN priority **GG**

The general format of the request is as follows:

Option 1:

GG GOOYYZYZ	Example:	GG GOOYYZYZ
DDHHHH OOOOOOOO		281050 EGRRYMYX
RQM/TTCCCCn,CCCC,(n from 1 to 3)		RQM/FTFCBB,FEFF,FTTJ=

Option 2:

GG GOOYYZYZ	Example	GG GOOYYZYZ
DDHHHH OOOOOOOO		281050 EGRRYMYX
RQM/TTAA(ii),AA(ii),=		RQM/SASG21,MI,MT,IV =

Option 3:

GG GOOYYZYZ	Example	GG GOOYYZYZ
DDHHHH OOOOOOOO		281050 EGRRYMYX
RQM/TTAA(ii),GGgg,.....=		RQM/SACD,1200,1300=

Option 4:

GG GOOYYZYZ	Example	GG GOOYYZYZ
DDHHHH OOOOOOOO		281050 EGRRYMYX
RQM/TTXXGGgg,CCCC,.....=		RQM/SAXX1200,DRRN,DBBB=

Option 5:

GG GOOYYZYZ	Example	GG GOOYYZYZ
DDHHHH OOOOOOOO		281050 EGRRYMYX
RQM/TTCCCC,TT=		RQM/SAFTTJ,FT=

Option 6:

GG GOOYYZYZ	Example	GG GOOYYZYZ
DDHHHH OOOOOOOO		281050 EGRRYMYX
RQM/TTCCCC,GGgg=		RQM/SAFTTJ,1300=

Option 7:

GG GOOYYZYZ	Example	GG GOOYYZYZ
DDHHHH OOOOOOOO		281050 EGRRYMYX
RQM/TTXXGGgg,AA(ii)=		RQM/SAXX1200,SG20,CG20,NR=

Where: GOOYYZYZ is the AFTN address of MESSIR-RODB
 DDHHHH is the message origination date/time group
 OOOOOOOO is the AFTN address of the message originator
 RQM indicates the start of a data request line

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/	indicates a new request within the data request line
TT	data type identifier (see paragraph 1.3)
CCCC	a 4-letter location indicator (ICAO publication 7010)
AA	Bulletin country identifier (WMO Manual on the GTS)
,	indicates more requests for messages or bulletins for the same data type
=	indicates the end of the request line

2.1.2. Through the GTS:

Request messages shall follow the GTS standard telecommunication procedures as defined in Manual on the GTS (Addressed messages). The text part of the message shall be defined in the document.

The standard GTS addressed message start and end characters and alignment characters (SOH, STX and ETX for ITA-5 format or ZCZC and NNNN for cITA-2 format) have been omitted for clarity in the following examples

The general format of the request is as follows:

Option 1:

BMRQ01 GOOY YYGGgg	Example:	BMRQ01 GOOY 281050
CCCC		EGRR
RQM/TTCCCCn,CCCC,(n from 1 to 3)		RQM/FTFCBB,FEFF,FTTJ=

Option 2:

BMRQ01 GOOY YYGGgg	Example:	BMRQ01 GOOY 281050
CCCC		EGRR
RQM/TTAA(ii),AA(ii),=		RQM/SASG21,MI,MT,IV =

Option 3:

BMRQ01 GOOY YYGGgg	Example:	BMRQ01 GOOY 281050
CCCC		EGRR
RQM/TTAA(ii),GGgg,....=		RQM/SACD,1200,1300=

Option 4:

BMRQ01 GOOY YYGGgg	Example:	BMRQ01 GOOY 281050
CCCC		EGRR
RQM/TTXXGGgg,CCCC,=		RQM/SAXX1200,DRRN,DBBB=

Option 5:

BMRQ01 GOOY YYGGgg	Example	BMRQ01 GOOY 281050
CCCC		EGRR
RQM/TTCCCC,TT=		RQM/SAFTTJ,FT=

Option 6:

BMRQ01 GOOY YYGGgg	Example:	BMRQ01 GOOY 281050
CCCC		EGRR
RQM/TTCCCC,GGgg=		RQM/SAFTTJ,1300=

Option 7:

BMRQ01 GOOY YYGGgg	Example:	BMRQ01 GOOY 281050
CCCC		EGRR
RQM/TTXXGGgg,AA(ii)=		RQM/SAXX1200,SG20,CG20,NR=

Where CCCC is a 4-letter location indicator (ICAO publication 7010) of the message originator.

2.1.3. Through Internet:

Request messages shall follow the Internet standard telecommunication procedures as defined. The text of the message shall be defined in the document.

The request shall be transmitted to ASECNA Dakar web server at the following address:

<http://www.RODB-web/>

The general format of the request is as follows, when the user will be authorized (after validation of his Login and Pasword):

Option 1:

RQM/TTCCCCn,CCCCC, ... (n from 1 to 3) Example:
RQM/FTFCBB,FEFF,FTTJ=

Option 2:

RQM/TTAA(ii),AA(ii),= Example:
RQM/SASG21,MI,MT,IV =

Option 3:

RQM/TTAA(ii),GGgg,.....= Example:
RQM/SACD,1200,1300=

Option 4:

RQM/TTXXGGgg,CCCC,.= Example:
RQM/SAXX1200,DRRN,DBBB=

Option 5:

RQM/TTCCCC,TT= Example:
RQM/SAFTTJ,FT=

Option 6:

RQM/TTCCCC,GGgg= Example:
RQM/SAFTTJ,1300=

Option 7:

RQM/TTXXGGgg,AA(ii)= Example:
RQM/SAXX1200,SG20,CG20,NR=

2.2. Reply Messages Format

2.2.1. Through AFTN :

If the originator AFTN address is authorized, MESSIR-RODB will automatically reply to the AFTN originator address given in the request message.

2.2.2. Through GTS

Valid requests for bulletins and/or messages will produce an answer, which will be returned in the following standard WMO bulletin format:

BMDA01 CCCC YYGGgg
GOOY
T1T2A1A2ii C1C1C1C1 Y1Y1G1G1g1g1

TEXT

END SIGNALS

Where

BMAA01 : the message type indicator of the reply
CCCC : a 4-letter location indicator (ICAO publication 7010) in the request
YYGGgg : date/time group of the reply
T1T2A1A2ii C1C1C1C1 Y1Y1G1G1g1g1 : abbreviated heading of a bulletin/message requested
TEXT : text of a bulletin/message requested

(Each bulletin will be sent as a separate message).

2.2.3. Through Internet:

If the Login and password of the originator are authorized, MESSIR-RODB will automatically reply to the Internet originator address given in the request message.
