APPENDIX L

INTERNATIONAL CIVIL AVIATION ORGANIZATION

APIRG
METEOROLOGY SUB-GROUP(MET/SG)

AFI OPMET MANGEMENT TASK FORCE

AFI OPMET DATA BANKS

INTERFACE CONTROL DOCUMENT
FOR

AFI OPMET Database Access Procedures

First Edition – March 2009

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1 INTRODUCTION

1.1 This Interface Control Document (ICD) describes the standard interrogation procedures for access to the designated Regional OPMET Databanks (RODBs) in the AFI Region. By accessing these databanks, the user implicitly acknowledges the disclaimer in paragraph 6.

1.2 The ICD contains details of:

- locations and AFTN addresses of the RODBs;
- request and reply AFTN message formats; and
- standard available meteorological products.

1.3 The ICD is published and maintained up-to-date by the ICAO Regional Offices, Dakar and Nairobi. The RODBs should notify regularly the Regional Offices of any changes in the procedures or content of the respective data banks.

2 REGIONAL OPMET DATABANKS

2.1 **Location**

The designated RODBs in the AFI Region are located at Dakar, Senegal and Pretoria, South Africa.

2.2 **AFTN Access Addresses**

The AFTN addresses that should be used to access the RODBs are the following:

Dakar	GOOYYZYZ
Pretoria	FAPRYMYX

2.3 **OPMET Data Types**

2.3.1 The following meteorological data types, as defined by the WMO data designator indicator, are stored and available on request from the RODBs:

TT	Message Type
SA	METAR/SPECI(1)
FT	18/24/36 HR TAF
WS	SIGMET
WC	Tropical Cyclone SIGMET (3)
WV	Volcanic Ash SIGMET(3)
UA	Special AIREP (2)
FV	Volcanic Ash Advisory (VAA)
FK	Tropical Cyclone Advisory (TCA)

Note (1):   A reply for a METAR request will consist of the latest METAR or SPECI reports available for the concerned station.
Note(2):   Not yet available in the AFI OPMET Databases
Note(3):   When a query for WS SIGMET is received, the reply will contain valid WS,WC and WV SIGMETs that are available for the FIR

2.3.2 Further data types may be added as new requirements emerge. Only data with valid WMO abbreviated headings as defined in the WMO publication No.386 should be processed.

3   REQUEST/REPLY MESSAGE FORMAT

3.1   **Request messages**

3.1.1   Request messages should follow the AFTN standard telecommunication procedures as defined in Annex 10, Volume II. The text part of the messages should be as defined in this document.

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

3.1.2   Request messages should use the AFTN priority GG.

3.1.3   The general format of the request message is as follows:

> **GG xxxxxxxx**
> **YYGGgg yyyyyyyy**
> **RQM/TTCCCC,(report(s)).../TTAAii, (bulletin(s))...=**
> **RQM/TTCCCC,(report(s)).../TTAAii, (bulletin(s))...=**
> **….**

The meaning of the groups and symbols in the request message is as follows:

3.1.3.1   In the AFTN heading:

GG	priority indicator
xxxxxxxx	AFTN address of the databank
YYGGgg	date-time group specifying the filing time of the request message
yyyyyyyy	AFTN address of the originator of the request

3.1.3.2   Each data request line is composed of the following elements:

RQM/	indicates the start of a data request line
TT	WMO data type identifier (as per paragraph 2.3)
CCCC	4-letter location indicator (as per ICAO Doc 7910)
or	
AAii	bulletin identifier (WMO Manual No. 386, table C1 for AA)
=	indicator of the end of a request line.

3.1.3.3   Delimiters can be used within a request line as follows:
   ,   indicates more requests for reports or bulletins for the same data type or different data types for one location;
   /   indicates a new data type request within the same data request line.

3.1.4   The length of the request line should not exceed 69 characters including 'RQM' and the '=' signal. Up to ten request lines can be included in one AFTN request message, unless otherwise specified by the RODB (see the Restrictions paragraph in the Appendices).

3.1.5   **Examples of request types**

3.1.5.1   ***Request for one data type at one location***

The format of the request line to obtain one meteorological data type for one location is as follows:

RQM/TTCCCC=

Examples:

1. RQM/SAFBSK=
2. RQM/FCFAJS=

3.1.5.2   *Request for one data type at two or more locations*

The format of the request line to obtain one MET data type for two or more locations is as follows:

RQM/TTCCCC$_1$,CCCC$_2$,......,CCCC$_n$=

Note: *Up to ten locations can be included in a request line.*

Examples:

1. RQM/SAYSSY,YBBN,YMML=
2. RQM/FTNZAA,NZCH=

3.1.5.3   *Request for two or more data types at one location*

The format of the request line to obtain two or more MET data types for one location is as follows:

RQM/TT$_1$CCCC,TT$_2$,......,TT$_n$=

Examples:

1. RQM/SAFQMP,FC=
2. RQM/FTFADN,SA,WC=

3.1.5.4   *Request for different data types at different locations*

The format of the request line to obtain different MET data types for a number of locations is as follows:

RQM/TT$_1$CCCC,CCCC, …/TT$_2$CCCC,CCCC,…/....../TT$_n$CCCC,CCCC,…=

Examples:

1. RQM/SAFBSK/FCFQMP,FBMN/FTFBSK=

3.1.5.5   *Request for a meteorological bulletin*

The format of the request line to obtain a Meteorological Bulletin is as follows:

RQM/TTAAii=

Examples:

1.   RQM/FTAE31=
2.   RQM/SATH33=

Note: *Only one bulletin can be requested in a RQM request line. Up to six bulletins can be included in a request message*

3.1.5.6   *Other request options*

RODBs may apply other specific request formats and options, such as requesting a number of preceding messages of certain data type, which should be described in the "specific request formats" section in the Appendices for each RODB.

3.2   **Reply messages**

3.2.1   If the AFTN address of the originator of a request is authorised, the databank should automatically reply to the AFTN originator address given in the request message.

3.2.2   Valid requests for bulletins and/or messages should produce an answer, which should be returned in a standard WMO bulletin format embedded as text in a standard AFTN message. Each bulletin should be sent as a separate message.

3.2.3   Per valid requested bulletin or message(s) belonging to the same type and concerning valid stored messages, one or more reply bulletins should be generated. Non-valid requested groups should be replied by an appropriate *Information* or *Error* reply message.

3.2.4   In preparing the reply messages by the RODBs the following should apply⊗
(See also notes at para.2.3.1).

3.2.4.1   A reply to a METAR request should consist of the latest METAR and/or SPECI reports available for the requested station.

3.2.4.2   When a request for SIGMET of any type (WS, WC or WV) is received, the reply should contain all valid WS, WV and WC SIGMETs that are available for the FIR concerned.

3.2.5   **Format of the reply message**

3.2.5.1   The WMO abbreviated heading of a reply message will be constructed as:

TTAAii CCCC YYGGgg
where,
TT   =   is the requested data type (e.g., SA)
AA   =   **XX** : fixed geographical designator for database
reply or as specified by the RODB
ii   =   **99** : fixed bulletin number for database reply or
as specified by the RODB

CCCC = location indicator of the reply database (e.g. FACT, HKJK, etc.)

YYGGgg = date-time group (DTG) depending on the original DTG of the bulletin header

Note: *For the issuing time of TAF and the observation time of METAR the user should refer to the DTG in the reports, which might be different from the DTG in the header.*

Example:

SAXX99 VTBB 031200
METAR CCCC 031200Z …
METAR CCCC 031200Z
…

3.2.6 **Format of the *Information* and *Error* reply messages**

3.2.6.1 Currently the RODBs are using different formats of the "*Information and Error messages*", which are sent to the originator of the request when the RODB is not in a position to send back valid OPMET data. The format of these messages is specified in the Appendices for each RODB.

4 DATABASE MISUSE AND ABUSE

4.1 The RODBs should on a continuous basis monitor all the requests received from AFTN-users. In order to determine possible abuse or misuse of the AFI Infrastructure (AFI RODBs and AMBEX scheme), a detailed investigation may be performed for all frequent users. A frequent user is a user performing 100 requests or more per day, on a regular basis.

4.2 These investigations might lead to the detection of:

4.2.1 **Misuse** of the DB: the DB is not used in the way it is intended to.

A typical example of misuse would be a user requesting on a regular basis (e.g. every hour) the same reports. In case of misuse of a RODB, the ICAO Regional Office should be notified and requested contact the database user , together with its Parent RODB or AMBEX centre (or equivalent for interregional users), in order to find an alternative way to receive the required data. If a suitable solution is found to receive the data using the regular OPMET exchange procedures, but this solution is not accepted by the databank user (i.e. the misuse continues), then the RODB could decide to limit *or block* the access to the AFI OPMET Database for this user.

4.2.2 **Abuse** of the DB: users are requesting data they are not entitled to receive or it is suspected that users use the data for commercial purposes.

In case of abuse of the RODB is suspected, the database user might be contacted by the ICAO Regional Office with a request for information on its databank use. After investigation, the RODB could decide to limit *or block* the access to the AFI OPMET Database for this user.

5   AFI OPMET DATABASE CATALOGUE

5.1   **Basic principles**

5.1.1   The AFI OPMET Database Catalogue consists of lists of OPMET products that are required to be available in the AFI Regional OPMET Databanks, based on the requirements stated in the AFI ANP and additional requirements by airlines, which have been agreed with the provider States.

5.1.2   AMBEX scheme and the RODBs should ensure availability of the required OPMET information from all AFI aerodromes included in the AOP Table of the AFI Basic ANP (respectively, in the FASID Table MET 1A). In addition, requirements for non-AOP aerodromes have been stated by airlines to support the evolving operations, especially the long-haul and ETOP flights. These requirements are included in the SADIS User Guide, Annex 1. The AFI OPMET Database Catalogue should include also those non-AOP aerodromes, for which the States concerned have agreed to provide the required OPMET information.

5.1.3   The AFI OPMET Database Catalogue is provided in three sections as follows:

   a)   *Message types METAR/SPECI, FT TAF and TAF: (section 1)*
   *The list of required reports is based on the CCCC list contained in the ANP/FASID (*Facillities and Services Implementation Document)*, adopted by ICAO. The names of the CCCC locations and States are those listed in AFI FASID Tables MET 1A and 2A.*

   b) *SIGMET: (section 2)*
   SIGMETs for all FIRs are required. The SIGMET list is based upon the list from ICAO AFI FASID Table MET 1B.

   c) Bulletins: (section 3)
   Bulletin requests are shortcuts for requests of lists of reports. The reply to a bulletin

   request consists of one or more messages containing the latest valid (not NIL) reports

   of the requested stations. The bulletin list is based on the AFI bulletin tables. The

   bulletins selected for this catalogue:

   -    belong to the AFI area (European "AA" in the header)
   -    have an "ii" < 50
   -    contain at least one station of the AFI OPMET DB station catalogue
   Some further manual selection was done, in case of duplicate TTAAii in the headers.

6.   AVAILABILITY OF DATABASE CATALOGUES ON INTERNET SERVERS AND CONTACT ADDRESSES

DB Agent	Catalogue on internet server	Contact address
DAKAR	DAKAR Catalogue: http://brdo.asecna.org AFI OPMET Database catalogue+ **To be filled**	Représentation de l'ASECNA au Sénégal BP 8132 Aéroport Léopold Sédar Senghor, Dakar/Yoff, Sénégal Fax : +221 33 820 06 00 AFTN : GOOYYMYX
PRETORIA	**To be filled**	South African Weather Service HQ Postal Address Private Bag X097 Pretoria 0001 South Africa Physical Address 442 Rigel Avenue South Erasmusrand Pretoria 0181 South Africa Telephone numbers Tel: +27 (0) 12 367 6000 Fax: +27 (0) 12 367 6300 (Reception) AFTN: FAPRYMYX

+:   The AFI OPMET Database Catalogue is the combined catalogue for the two AFI OPMET DBs (Dakar and Pretoria), defining their minimum common contents. The file structure and its contents are identical on all two FTP servers.

7.   DISCLAIMER

7.1   Usage of the AFI RODBs implies that the user has taken notice of the disclaimer below, and accepts the associated consequences.

7.1.1   The lists of bulletins and stations in the AFI OPMET Database Catalogue only consist of lists of required data. It does not mean that these data are presently received in the AFI OPMET Database, or have been yet received.

7.1.2   The fact that there is no data found for one location and one type of message in the AFI OPMET Database does not mean that a message has not been generated for such

a location, but only means that no valid message concerning such a location and such a type of message has been received or stored by the AFI OPMET Database.

7.1.3   The user assumes the entire risk related to its use of data.

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