INTERNATIONAL CIVIL AVIATION ORGANIZATION

AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP (APIRG)

REPORT OF THE FIRST MEETING OF THE AFI OPMET MANAGEMENT TASK FORCE (AFI MTF/1)

(Dakar, Senegal, 19 - 20 October 2009)

Prepared by the Secretary of AFI MTF

Rev.1

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PART 1 - HISTORY OF THE MEETING

Date and Site of the Meeting

1.1.1 The First Meeting of the AFI OPMET Management Task Force (MTF/1) was held at the premises of the ICAO Western and Central African Office (WACAF), Dakar, Senegal, from 19 to 20 October 2009.

Officers and Secretariat

1.2.1 Mr. Mam Sait Jallow, Deputy Regional Director of the Western and Central African Office opened the meeting. He expressed his appreciation to the participants attending this first meeting of the MTF, and highlighted the tasks to be accomplished during the meeting.

1.2.2 Mr. Jallow recalled that the OPMET MTF was established by APIRG during its 16th meeting with the objective to enhance operational meteorological (OPMET) information exchange in the AFI Region and adjacent regions by regularly reviewing the OPMET exchange scheme and developing proposals for their optimization, developing monitoring and management procedures related to the AFI MET Bulletin Exchange (AMBEX) scheme and other exchange of OPMET information, and updating the regional guidance material related to OPMET exchange, in the interest of safety, efficiency and economy of civil aviation.

1.2.3 He said he remained convinced this Task Force will provide substantial material for the incoming future MET/SG/9 meeting while keeping the main objective of improving meteorological services for aviation in the region in mind.

1.2.4 The AFI OPMTE MTF/1 was chaired by Mr. Nirison Rakotoarimanana from Madagascar CAA, Mr. Akoi T. Vanyanbah from Liberia CAA being the Vice-Chairperson. Mr. A. Benoit Okossi, Regional Officer, Aeronautical Meteorology, ICAO Western and Central African Office, Dakar, Senegal, served as the Secretary and was assisted by Mr. B. M. Sekwati, Regional Officer, Aeronautical Meteorology of the ICAO Eastern and Southern African Office, Nairobi, Kenya.

Attendance

1.3.1 The meeting was attended by fifteen (15) participants from nine (9) Member States including two (2) International Organizations; IATA and ASECNA.

1.3.2 The list of participants is at **Appendix A**.

Working Languages

1.4.1 The discussions were conducted in the English language only as per APIRG procedures concerning the Task Forces.

Agenda

1.5.1 The following Agenda was adopted:

Agenda Item 1: Election of Chairman and Vice-Chairman of the Task Force.

Agenda Item 2: Review of the AFI Meteorological Bulletin Exchange (AMBEX) scheme.

- 2.1: Review of the requirements for OPMET information exchange in AFI and adjacent regions and procedures for exchange of all required OPMET data types.
- 2.2: Inter-regional OPMET information exchange procedures and satellite distribution system for information relating to air navigation (SADIS).
- 2.3: Development of procedures for monitoring and management of the OPMET information exchange at AMBEX centres and the Regional OPMET Data Banks (RODBs).

Agenda Item 3: Regional Interface Control Document (ICD) for AFI OPMET Database Access Procedures.

Agenda Item 4: Terms of reference, work programme and composition of the AFI OPMET MTF.

Agenda Item 5: Any other business.

1.6. Documentation and Working Language

1.6.1 The working language of the Meeting as well as all documentation was in English.

1.6.2 Six (6) Working Papers and three (3) Information Papers were presented at the Meeting. The List of Papers is included at **Appendix B** to this Report.

1.7 Recommendations

1.7.1 The OPMET MTF recorded its action in the form of recommendations and decisions, with the following significance:

- Decisions deal with matters of concern only to the OPMET MTF;
- Recommendations, when reviewed by the MET/SG, became Draft Conclusions for the matters which in accordance with the APIRG Terms of Reference, merit the attention of States or on which further action will be initiated by ICAO in accordance with established procedures, or Draft Decisions, when approved by MET/SG, deal with matters of concern only to the MET/SG.

PART II - REPORT ON THE AGENDA

Agenda Item 1: Election of Chairman and Vice-Chairman of the Subgroup

1.1 In accordance with the relevant provisions contained in the APIRG Procedural Handbook, the Task Force elected its Chairperson and Vice-Chairperson. Mr. Nirison Rakotoarimanana from Madagascar CAA and Mr. Akoi T. Vanyanbah from Liberia CAA, were elected Chairperson and Vice-Chairperson respectively.

Agenda Item 2: Review of the AFI Meteorological Bulletin Exchange (AMBEX) scheme

2.1 Review of the requirements for OPMET information exchange in AFI and adjacent regions and procedures for exchange of all required OPMET data types

2.1.1 The Task Force recalled that AMBEX scheme was intended initially only for TAF exchanges; AIREPs and METAR were added to the scheme at a later stage. In March 2009, the 7th Edition of the AMBEX Handbook introduced new OPMET data types for SIGMETs (WS, WV, WC), Volcanic Ash Advisory (VAA) and Tropical Cyclone (TCA) in the AMBEX Scheme, to make the AMBEX scheme compatible with the existing communication environment and satisfy the evolving user requirements.

2.1.2 In this regard, the Task Force reviewed OPMET information and exchange described in working paper two (WP/2) as given in **Appendix C** to this report, and adopted the following recommendation:

Recommendation 1/1 AFI OPMET INFORMATION EXCHANGE REQUIREMENTS

That, the OPMET data type, OPMET bulletin and types of OPMET exchange in the Appendix C to this paper, be implemented by Dakar and Pretoria Regional OPMET Data Banks (RODB), AMBEX Bulletin Compiling Centres (BCC) and National OPMET Centres (NOC) as the OPMET requirements in the AFI region.

2.2 Inter-regional OPMET information exchange procedures and satellite distribution system for information relating to air navigation (SADIS)

2.2.1 The Task Force was presented with WP/3 which described the Interregional OPMET information exchange procedures and satellite distribution system for information relating to air navigation (SADIS). The meeting then reviewed the OPMET information exchange procedures and found that, to enhance OPMET exchange in the AFI region, the IROG functions given in **Appendixes D and E** should be implemented as the requirements for the interregional OPMET exchange and IROG functions in the AFI Region. The MTF/1 then formulated the following recommendation:

Recommendation 1/2 INTERREGIONAL OPMET EXCHANGE AND IROG FUNCTIONS

That, the IROG functions and the exchange of OPMET between the AFI region and adjacent regions in Appendixes D and E to this paper, be implemented by Dakar and Pretoria RODBs as the requirements for the Interregional OPMET exchange and IROG functions in the AFI region.

2.2.2 The Task Force reviewed the HAMBEX Handbook and suggested the entire document be revised by the incoming MET/SG meeting.

2.2.3 The meeting recalled that during its fourteenth meeting in Bangkok, Thailand, 15 – 17 July 2009, the SADIS Operations Group (SADISOPSG) agreed to review SADIS User Guide (SUG) Annex 1, based on proposal made by IATA attempted to render the requirements consistent with OPMET data that was actually made available by States. Similarly, the Task Force agreed that the requirements OPMET data from non-AOP aerodromes for the AFI region, be amended accordingly as given in the **Appendix F** to this report. The meeting agreed on the proposed amendments and formulated the following recommendation:

Recommendation 1/3 REVISION OF THE REQUIREMENTS OF OPMET DATA FROM NON-AOP AERODROMES IN THE AFI REGION

That, information related to the requirements of OPMET data from non-AOP aerodromes as given in Appendix F to this report, be submitted by ICAO Regional Offices to the concerned States for approval, before amending the AFI FASID MET Table 2A and Annex 1 to the SADIS User Guide (SUG).

2.2.4 The Task Force then reviewed the OPMET data required from AOP aerodromes based on proposals from States and ASECNA to reflect the current status and future requirements. In this regard, the Task Force agreed that the requirements OPMET data from AOP aerodromes for the AFI region, be amended accordingly as given in the **Appendix G** to this working paper. The Task Force then formulated the following recommendation:

Recommendation 1/4 REVISION OF THE REQUIREMENTS OF OPMET DATA FROM AOP AERODROMES IN THE AFI REGION

That, information related to the requirements of OPMET data from AOP aerodromes, as given in Appendix G to this report, be submitted by ICAO Regional Offices to the concerned States for approval, before amending the AFI FASID MET Table 1A.

2.3 Development of procedures for monitoring and management of the OPMET information exchange at AMBEX centres and the Regional OPMET Data Banks (RODBs))

2.3.1 The meeting reviewed the management and monitoring of the OPMET information exchange at AFI BCCs and RODBs, described in the **Appendixes H and I** to this report, as developed in the Chapter 12 of the AMBEX Handbook, for further implementation by the components of the AMBEX scheme as the requirements for the OPMET information exchange procedures at AFI BCCs and RODBs.

2.3.2 In this regard, the Task Force agreed that the requirements OPMET information exchange procedures at AFI BCCs and RODBs as given in the **Appendixes H and I** to this report, be implemented by Dakar and Pretoria RODBs and by the BCCs. The meeting agreed on the proposed procedures and formulated the following recommendation:

Recommendation 1/5 OPMET EXCHANGE MONITORING AND MANAGEMENT PROCEDURES AT BCC AND RODB

That, the OPMET management and monitoring procedures given in Appendixes H and I to this report, be implemented by the RODBs and the BCC as the requirements for OPMET exchange monitoring and management procedures in the AFI region.

Agenda Item 3: Regional Interface Control Document (ICD) for AFI OPMET Database Access Procedures

3.1 The meeting recalled that at the thirteenth meeting of the APIRG (APIRG/13) in Sal, Cape Verde, 2001, the group decided through Conclusion 13/67 to establish two OPMET data banks in Dakar, Senegal and Pretoria (Johannesburg) to serve the AFI Region. The data banks became operational in 2007. In order to serve the authorized users, there is a need to develop common access procedures by the data banks.

3.2 The task Force then reviewed the Regional Interface Control Document (ICD) for AFI OPMET Database Access Procedures described in the AMBEX Handbook as given in **Appendix J** to this report. The meeting agreed on the proposed procedures and formulated the following recommendation:

Recommendation 1/6: INTERFACE CONTROL DOCUMENT (ICD) FOR AFI OPMET DATABASE ACCESS PROCEDURES

That,

1) **the Procedures given in Appendix J to this report, be implemented as the Regional Interface Control Document (ICD) for AFI OPMET Database Access Procedures.**

2) **The ICD be published by the ICAO Regional Office through an AIP Supplementary.**

Agenda Item 4: Terms of Reference, work programme and composition of the AFI OPMET MTF

4.1 The Task Force reviewed Terms of Reference, work programme and composition of the AFI OPMET MTF.

4.2 The Task Force noted the composition of the MTF and its Terms of Reference shown as described by APIRG during the establishment of the AFI OPMET MTF. The Task Force recalled that the Terms of Reference reflect the overall tasks of the MTF and need to be revised only when major changes are introduced to the MTF programme. Furthermore, any change would have to be subject to a draft conclusion to be endorsed by APIRG. The meeting agreed that there was no need to amend the terms of reference at this meeting.

4.3 In reviewing the work programme, the meeting updated the following elements for the purposes of planning resources for the next 5 years (2009 to 2013 inclusive) including current and next triennium:

a) future work programme for 2009 to 2013; and

b) executive summaries for each recurrent task.

4.4 The Task Force noted that the work programme will be subject to revision and consolidation in order to align it with the ICAO Business Plan and to better reflect the work that is being undertaken by the MTF.

4.5 The MTF reviewed the draft work programme, endorsed the changes proposed and formulated the following recommendation:

Recommendation 1/7: REVISION OF THE WORK PROGRAMME OF THE AFI OPMET MTF

That, the work programme of the MTF be updated as shown in Appendix K.

4.6 The meeting felt that to assess progress on assigned activities, the Task Force will need to meet at least once a year for the review of new users OPMET requirements from SADIS, review of results of SIGMET Tests, review of results of OPMET monitoring by the RODBs, assess the performance of the RODBs, etc. The meeting then formulated the following recommendation:

Recommendation 1/8: FREQUENCY OF THE MEETINGS OF THE MTF

That, the Task Force meets once a year to plan and assess progress on assigned activities: review new users OPMET requirements from SADIS, review results of SIGMET Tests, review results of OPMET monitoring by the RODBs, assess the performance of the RODBs, etc. The yearly meeting will be held alternatively between RODB Dakar and Pretoria

Agenda Item 5: Any other business

5.1 There being no other business, the Chairman closed the meeting and thanked the delegates for their contributions.

APEENDIX A

First Meeting of AFI OPMET Management Task Force
(AFI OPMET MTF/1)

(Dakar, 19 – 20 October 2009)

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AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP (APIRG)

AFI OPMET MANAGEMENT TASK FORCE (AFI OPMET MTF)
FIRST MEETING (AFI OPMET MTF/1)

(Dakar, 19 - 20 October 2009)

LIST OF DOCUMENTS

Working Papers (WP)			
Agenda	**WP/No.**	**WP/Title**	**Prenseted by**
	WP/1	Provisional Agenda	Secretariat
2.1	WP/2	Review of the requirements for OPMET information exchange in AFI and adjacent regions and procedures for exchange of all required OPMET data types	Secretariat
2.2	WP/3	Interregional OPMET information exchange procedures and satellite distribution system for information relating to air navigation (SADIS)	Secretariat
2.3	WP/4	Development of procedures for monitoring and management of the OPMET information exchange at AMBEX centres and the Regional OPMET Data Banks (RODBs)	Secretariat
3	WP/5	Regional Interface Control Document (ICD) for AFI OPMET Database Access Procedures	Secretariat
4	WP/6	Terms of reference, work programme and composition of the AFI OPMET MTF	Secretariat
Information Papers (IP)			
Agenda	**IP/No.**	**IP/Title**	**Prenseted by**
1	IP/1	Information Bulletin	Secretariat
2	IP/2	List of Documents	Secretariat
3	IP/3	Working Programme	Secretariat
4			

OPMET INFORMATION AND OPMET EXCHANGES

1.1 OPMET Data Type

1.1.1 The following OPMET data types should be handled by the AMBEX scheme:

Data type	Abbreviated name	WMO data type designator
Aerodrome reports	METAR SPECI	SA SP
Aerodrome forecasts	TAF: 24 and 30 hour	FT
SIGMET information	SIGMET SIGMET for TC SIGMET for VA	WS WC WV
Volcanic ash and tropical cyclone advisories	Volcanic Ash Advisory Tropical Cyclone Advisory	FV FK
Air-reports	AIREP AIREP SPECIAL (ARS)	UA
Administrative	ADMIN	NO

1.2 OPMET bulletins

1.2.1 The exchange of OPMET data is carried out through bulletins containing one or more meteorological messages (METAR, SPECI, TAF or other OPMET information). An OPMET bulletin contains messages of the same type.

1.2.2 The format of OPMET bulletins is determined by:

- *ICAO Annex 10, Aeronautical telecommunications*, as regards the AFTN envelope of the bulletin;
- WMO-No.386, *WMO Manual on the Global telecommunication System*, as regards the WMO abbreviated heading of the bulletin;
- *ICAO Annex 3* and WMO-No.306, *Manual on Codes*, as regards the format and coding of the information included in the bulletin.

1.3 Types of OPMET exchange

1.3.1 Regional exchange – AMBEX scheme

1.3.1.1 The AMBEX scheme covers the exchange of OPMET information in the AFI region. It includes several types of exchanges as described below.

1.3.1.1.1 *Regular Exchange under AMBEX*. This is a scheduled exchange that encompasses collection of messages from the originating stations, compiling of bulletins and their dissemination according to predetermined distribution schemes. The collection and distribution is carried out at fixed times and the bulletin content is defined in the current Handbook.

1.3.1.1.2 *Non-regular exchange.* This includes:

a) *Exchange on request (request-reply service)*. The RODBs store OPMET data and make them available on request.
b) *Exchange of non-routine reports:* SPECI; TAF AMD; SIGMET; TCA and VAA; ADMIN messages.

1.3.2 Inter-regional OPMET exchange

1.3.2.1 Exchange of OPMET data between the AFI and the other ICAO Regions is carried out via designated centres, which serve as Inter-regional OPMET Gateways (IROG). An IROG is set up for sending/receiving specified OPMET data between AFI and every other ICAO region for which AFI OPMET data are required.

Note: The former name of these centres is ODREP.

1.3.2.2 Inter-regional OPMET exchange via IROGs is carried out through the ground segment of the AFS (currently, through the AFTN).

1.3.3 Exchange of OPMET information through the satellite segment of the AFS

1.3.3.1 The three satellite broadcasts provided by the United Kingdom (Satellite Distribution System for Aeronautical Information Relating to Air Navigation - SADIS) and the United States (International Satellite Communication System – ISCS/1 and ISCS/2), form another type of OPMET exchange, which is global in nature and is intended to cover the emerging requirement for global access to all available OPMET data.

1.3.3.2 All AFI data handled by the AMBEX scheme should be relayed to the SADIS for global broadcast.

1.3.4 Other OPMET exchanges

1.3.4.1 Where OPMET exchanges described in the above paragraphs are not sufficient, direct AFTN addressing should be utilized by the originating centres.

APPENDIX D

INTER-REGIONAL OPMET EXCHANGE - IROG FUNCTIONS

1. Inter-regional OPMET Gateways (IROGs) are designated in the AFI Region for the the purpose of exchanging OPMET data between the AFI and the other ICAO Regions, as shown in the table below.

AMBEX IROG	For Excchange of OPMET data between Regions
Dakar	AFI and EUR, SAM, NAM, CAR, and MID, ASIA/PAC as backup
Pretoria	AFI and MID, ASIA/PAC, and EUR, SAM, NAM, CAR as backup

2 IROGs and their functions are described at **Appendix E** of the AMBEX Handbook**.** IROGs arrange for relaying all AMBEX bulletins to a corresponding OPMET Gateway in the other ICAO regions concerned. In particular:

A) *Dakar IROG* relays all AFI bulletins to IROG Toulouse in the EUR Region, which serves the EUR, SAM, NAM and MID Regions, and should receive and store all required OPMET bulletins from these Regions;

B) *Pretoria IROG* relays all AFI bulletins to IROG London in the EUR Region and IROG Bangkok in the the ASI/PAC Regions, and should receive and store all required OPMET bulletins from MID, ASIA/PAC, EUR, SAM Regions;

3 The following principles are applied to IROGs:

1) IROGs should have reliable and efficient AFTN connection to the regions, for which they have exchange responsibilities, with adequate capacity to handle the OPMET data flow between the regions;

2) IROGs should be associated with AFTN relay centres capable of handling efficiently the volume of traffic anticipated;

3) IROGs should be capable of handling all OPMET data types, as described at para.3.1.1 to the HAMBEX Handbook.

4 In order to avoid duplication of the OPMET traffic and information, all inter-regional OPMET exchange should be directed through the IROGs. Inter-regional exchange via direct AFTN addressing from the originator or AMBEX centre to recipients in the other ICAO Regions should be avoided, except when bilateral or other agreements require such direct exchanges.

APPENDIX E

EXCHANGE OF OPMET DATA BETWEEN THE AFI, EUR, MID AND ASIA REGION

IROG RESPONSIBILITIES

1. DAKAR IROG

1.1. Outgoing responsibilities

1.1.1 Prepare TAF bulletin FTA038 containing Dakar (GOOYYMYX), Abidjan (DIAPYMYX), Banjul (GBYDYMYX), Bamako (GABSYMYX), Conakry (GUCYYMYX), Freetown (GFLLYMYX), Monrovia (GLRBYMYX), Nouadhibou (GQPPYMYX), Nouakchott (GQNNYMYX), Sal (GVACYMYX) and Bissau (GGOVYMYX) and send it to Rio de Janeiro and Toulouse (LFZZMAFI).

1.1.2 Prepare TAF bulletin FTA039 containing Niamey (DRRNYMYX), Accra (DGAAYMYX), Cotonou (DBBBYMYX), Kano (DNKNYMYX), Lagos (DNMMYMYX), Lomé (DXXXYMYX), NDjamena (FTTJYMYX) and Ouagadougou (DFFDYMYX) and send it to Rio de Janeiro and Toulouse.

1.1.3 Prepare TAF bulletin FTAM38 containing Brazzaville (FCBBYMYX), Pointe Noire (FCPPYMYX), Bangui (FEFFYMYX), Douala (FKKDYMYX), Yaounde (FKYSYMYX), Kinshasa (FZAAYMYX), Libreville (FOOLYMYX), Port Gentil (FOOGYMYX), Luanda (FNLUYMYX), Malabo (FGSLYMYX) and Sao Tome (FPSTYMYX) and send it to Rio de Janeiro and Toulouse.

1.1.4 Prepare TAF bulletin FTAF38 containing Alger (DAMMYMYX), Annaba (DABBYMYX), Oran (DAOOYMYX), Tamanrasset (DAATYMYX), Tunis (DTTAYMYX), Tripoli (HLLTYMYX) and Benghazi (HLLBYMYX) and send it to Rio de Janeiro et Toulouse.

1.1.5 Prepare TAF bulletin FTMC38 containing Casablanca (GMMNYMYX), Agadir (GMAAYMYX), Marrakech (GMMXYMYX), Rabat (GMMEYMYX), Tanger (GMTTYMYX), Las Palmas (GCLPYMYX) and Tenerife Sur (GCTSYMYX) and send it to Rio de Janeiro and Toulouse.

1.2. Incoming responsibilities

1.2.1 Prepare TAF bulletin FTSA38 containing Ascuncion, Buenos Aires, Campo Grande, Mendoza, Montevideo, Recife, Rio de Janeiro, Salvador, Santiago and Sao Paulo and send dit to Dakar, Abidjan, Banjul, Bamako, Conakry, Freetown, Monrovia, Nouadhibou, Nouakchott, Sal, Bissau, Niamey, Accra, Cotonou, Kano, Lagos, Lomé, NDjamena, Ouagadougou, Brazzaville, Pointe Noire, Bangui, Douala, Yaounde, Kinshasa, Libreville, Port Gentil, Luanda, Malabo, Sao Tome, Alger, Annaba, Oran, Tamanrasset, Tunis, Tripoli et Benghazi, Casablanca, Agadir, Marrakech, Rabat, Tanger, Las Palmas and Tenerife Sur.

1.2.2 Relay all bulletins internationally exchanged in the EUR region and which types are defined in paragraph 4.1.1 of this Plan to Dakar, Abidjan, Banjul, Bamako, Conakry, Freetown, Monrovia, Nouadhibou, Nouakchott, Sal, Bissau, Niamey, Accra, Cotonou, Kano, Lagos, Lomé, NDjamena, Ouagadougou, Brazzaville, Pointe Noire, Bangui, Douala, Yaounde, Kinshasa, Libreville, Port Gentil, Luanda, Malabo, Sao Tome, Alger, Annaba, Oran, Tamanrasset, Tunis, Tripoli et Benghazi, Casablanca, Agadir, Marrakech, Rabat, Tanger, Las Palmas and Tenerife Sur.

2. PRETORIA IROG

2.1. Outgoing responsibilities

2.1.1 Prepare TAF bulletin FTAP38 containing Johannesburg (FAPRYMYX), Bloemfontein (FABLYMYX), Capetown (FACTYMYX), Durban (FADNYMYX), Gaborone (FBSKYMYX), Harare (FVHAYMYX), Lilongwe (FWLIYMYX), Lusaka (FLLSYMYX), Manzini (FDMSYMYX), Beira (FQBRYMYX), Maputo (FQMAYMYX), Maseru (FXMMYMYX) and Windhoek (FYWHYMYX) and transmit to London, Toulouse, IROG, Jeddah (OEJDYPYX) and Bangkok(……).

2.1.2 Prepare TAF bulletin FTAF38 containing Cairo (HECAYMYX), ALEXANDRIA (HEAXYMYX), Luxor (HELXYMYX) and Khartoum (HSSSYMYX) and then transmit to IROG Jeddah (OEJDYPYX) and Toulouse (LFZZMAFI).

2.1.3 Prepare TAF bulleti FTEA38 containing Addis Ababa (HAABYMYX), Asmara (HAAYYMYX), Dire Dawa (HADRYMYX), DjiboutI (HDAMYMYX) and transmit to IROG Jeddah (OEJDYPYX) and London(….).

2.1.4 Prepare TAF bulletin FTEA39 containing Nairobi (HKJKYPYX), Mombasa (HKMOYMYX), Dar-es-Salam (HTDAYMYX), Kilimanjaro (HTKJYMYX), Bujumbura (HBBAYMYX), Entebbe (HUENYMYX), Kigali (HRYRYMYX), Mahé (FSIAYMYX) and Mogadishu (HCMMYMYX) and transmit to IROG Jeddah (OEJDYPYX), Bombay (VABBYPYX) and London(…….)

2.1.5 Prepare TAFBulletin FTIO38 containing Antananarivo(FMMIYMYX), Mahajanga (FMNMYMX), Mauritius (FIMPYMYX), Moroni (FMCHYMYX), Saint-Denis (FMEEYMYX), Toamasina (FMMTYMYX) and transmit to IROG Jeddah (OEJDYPYX), Toulouse, Bombay (VABBYPYX) and Bangkok.(……)

2.2. Incoming responsibilities

2.2.1 Relay Jeddah TAF bulletin FTAS31 to Alger and Cairo BCCs.

2.2.2 Relay Beirut TAF bulletin FTAW31 to Cairo, Tripoli and Tunis.

2.2.3 Relay Bahrain TAF bulletin FTPE31 to Cairo and Khartoum.

2.2.4 Relay Bangkok TAF bulletin FTAE31 to Cairo.

2.2.5 Relay Bombay TAF bulletin FTAS31 to Nairobi

2.2.6 Relay Jeddah TAF bulletin FTAS31 to Antananarivo BCC and to Nairobi, Dar-es-Salaam and Mahe.

2.3.7 Receive via GTS from Offenbach selected EUR TAF bulletins and relay them as follows:

ROBEX Bulletins/ Bulletins ROBEX	To aerodromes / Vers les aérodromes				
	Addis Ababa	Djibouti	Harare	Khartoum	Nairobi
FTBX31					x
FTDL31					x
FTFR31		x			x
FTGR31	x			x	x
FTIY31	x				x
FTNL31				x	x
FTSW31					x
FTUK31			x		x

APPENDIX F

UPDATED FASID TABLE MET 2A FROM USERS NEW REQUIREMENTS

OPMET INFORMATION (METAR, SPECI AND TAF) REQUIRED IN ISCS AND SADIS

EXPLANATION OF THE TABLE

Column

1 Aerodromes in the AOP Tables of the Air Navigation Plans

Note: The name is extracted from the ICAO Location Indicators (Doc 7910) updated quarterly. If a state wishes to change the name appearing in Doc 7910 and this table, ICAO should be notified officially.

2 Aerodromes not listed in the AOP Tables of the Air Navigation Plans

Note: The name is extracted from the ICAO Location Indicators (Doc 7910) updated quarterly. If a state wishes to change the name appearing in Doc 7910 and this table, ICAO should be notified officially.

3 Location indicator

4 Availability of METAR/SPECI

5 Requirement for aerodrome forecasts in TAF code

C - Requirement for 9-hour validity aerodrome forecasts in TAF code (9H)
T - Requirement for 18/24-hour validity aerodrome forecasts in TAF code (18/24H)
X - Requirement for 30-hour validity aerodrome forecasts in TAF code (30H)

6 Availability of OPMET information

F - Full : OPMET data as listed issued for the aerodrome all through the 24-hour period
P - Partial : OPMET data as listed not issued for the aerodrome for the entire 24-hour period
N - None : No OPMET data issued for the time being;

MET 2A - AFI

Aerodrome where service is to be provided			OPMET to be provided		
Listed in AOP Tables	**Not Listed in AOP Tables**	**ICAO Location Indicator**	**SA/SP**	**TAF**	**Availability**
1	2	3	4	5	6
Algeria					
ADRAR/TOUAT-CHEIKH SIDI MOHAMED BELKEBIR		DAUA			F
ALGER/HOUARI BOUMEDIENE		DAAG	Y	T	F
ANNABA/RABAH BITAT		DABB	Y	T	F
	BATNA/MOSTEFA BEN BOULAID	**DABT**	**Y**	**T**	
	BECHAR/BOUDGHENE BEN ALI LOTFI	DAOR	Y	T	F
	BEJAIA/SOUMMAM-ABANE RAMDANE	DAAE	Y	C	F
	BISKRA Y	DAUB	Y	C	F
	BORDJ MOKHTAR	**DATM**	**Y**	**T**	
	BOU SAADA	DAAD	Y	T	F
CONSTANTINE/MED BOUDIAF		DABC		T	F
	DJANET/TISKA	DAAJ	Y	C	F
	ECH CHELIT	**DAOI**	**Y**	**T**	
	EL BAYADH	**DAOY**	**Y**	**T**	
	EL GOLEA	DAUE	Y	T	F
	EL OUED/GUEMAR	DAUO	Y	C	F
GHARDAIA/NOUMERAT-MOUFDI ZAKARIA		DAUG			F
	GHRISS	DAOV	Y	~~C~~ T	F
	HASSI RMEL	**DAFH**	**Y**	**T**	
HASSI MESSAOUD/OUED IRARA-KRIM BEL		DAUH			F
	ILLIZI/TAKHAMALT	DAAP	Y	C	F
	IN GUEZZAM	DATG	Y	~~C~~ T	F
IN SALAH		DAUI			F
	JIJEL/FERHAT ABBAS	DAAV	Y	C	F
	LAGHOUAT AFB	**DAUL**	**Y**	**T**	
	MECHERIA AIRFORCE BASE	**DAAY**	**Y**	**T**	
ORAN/ES SENIA		DAOO	Y	T	F
	ORAN/TAFARAOUI	**DAOL**	**Y**		
	OUARGLA	DAUU	Y	C	F
	SETIF	**DAAS**	**Y**	**T**	
TAMANRASSET/AGUENAR		DAAT		T	F
TEBESSA/CHEIKH LARBI TEBESSI		DABS			F
	TIARET ABDELHAFID BOUSSOUF AIN BOU CHEKIF	DAOB	Y	C	F
	TINDOUF	**DAOF**	**Y**	**T**	
	TIMIMOUN	DAUT	Y	C	F
TLEMCEN/ZENATA-MESSALI EL HADJ		DAON		T	F
	TOUGGOURT/SIDI MAHDI Y	DAUK	Y	C	F
ZARZAITINE/IN AMENAS		DAUZ			F
Angola					
	CABINDA	FNCA	Y	T	F
HUAMBO		FNHU			F
LUANDA/4 DE FEVEREIRO		FNLU	Y	X	F
Ascention Ile (RU)					
	ASCENTION	FHAW		T	F
	WIDEAWAKE/ASCENSION	**FHAW**	**Y**	**T**	
Benin					
COTONOU/CADJEHOUN		DBBB	Y	X	F

Aerodrome where service is to be provided			OPMET to be provided		
Listed in AOP Tables	Not Listed in AOP Tables	ICAO Location Indicator	SA/SP	TAF	Availability
1	2	3	4	5	6
Botswana					
FRANCISTOWN		FBSK	Y	T	F
GABORONE/SIR Seretse Khama Intl		FBSK	Y	X	F
	GHANZI	FBGZ	Y		F
	JWANENG	**FBJW**	**Y**		
KASANE		FBKE	Y	T	F
MAUN		FBMN	Y	T	F
SELIBE-PHIKWE		FBSP	Y	T	F
	TSHABONG	**FBTS**	**Y**		
British Indian Ocean Territory (United Kingdom)					
	DIEGO GARCIA (SEE/VOIR/VES "KJDG")	FJDG	Y	T	F
Burkina Faso					
BOBO DIOULASSO		DFOO			F
OUAGADOUGOU/AEROPORT		DFFD	Y	X	F
Burundi					
BUJUMBURA			Y	T	F
Cameroon					
DOUALA/AEROPORT		FKKD	Y	X	F
GAROUA		FKKR	Y		F
MAROUA/SALAK		FKKL			F
N'GAOUNDERE		FKKN			F
YAOUNDE/NSIMALEN		FKYS	Y	T	F
Canary Islands (Spain)					
FUERTEVENTURA		GCFV		T	F
GRAN CANARIA		GCLP	Y	T	F
HIERRO		GCHI			F
LA PALMA		GCLA			F
LANZAROTE		GCRR		T	F
TENERIFE NORTE (AD CIVIL)		GCXO	Y	T	F
TENERIFE SUR/REINA SOFIA		GCTS	Y	T	F
Cape Verde					
AMILCAR CABRAL/SAL ISLAND		GVAC	Y	X	F
PRAIA **INTL**		GVNP	**Y**	**T**	F
	RABIL/BOA VISTA ISLAND	**GVBA**	**Y**	**T**	
	SAO PEDRO/SAO VICENTE ISLAND	GVSV	Y	T	F
Central African Republic					
	BANGASSOU	FEFG	Y		F
BANGUI/M'POKO		FEFF	Y	X	F
BERBERATI		FEFT			F
Chad					
	ABECHE	**FTTC**	**Y**		
	FAYA LARGEAU	**FTTY**	**Y**		

Aerodrome where service is to be provided		OPMET to be provided			
Listed in AOP Tables	***Not Listed in AOP Tables***	**ICAO Location Indicator**	**SA/SP**	**TAF**	**Availability**
1	***2***	**3**	**4**	**5**	**6**
	MOUNDOU	FTTD	Y		F
N'DJAMENA/HASSAN DJAMOUS		FTTJ	Y	X	F
	SARH	FTTA	Y		F
Comoros					
DZAOUDZI PAMANDZI		FMCH	Y	T	F
MORONI/IHAHAIA		FMCH	Y	X	T
Congo					
BRAZZAVILLE/MAYA-MAYA		FCBB	Y	F	F
	DOLISIE	FCPD	Y		F
	IMPFONDO	FCOI	Y		F
	OUESSO	FCOU	Y		F
POINTE NOIRE		FCPP	Y	T	F
Côte d'Ivoire					
ABIDJAN/FELIX HOUPHOUET BOIGNY		DIAP	Y	~~T~~ X	F
BOUAKE		DIAP			F
	KORHOGO	DIKO	Y		F
	MAN	DIMN	Y		F
	SAN PEDRO	DISP	Y		F
	YAMOUSSOUKRO	DIYO	Y		F
Democratic Republic of the Congo					
GOMA		FZNA			F
	KALEMIE	FZRF	Y		F
	KAMINA-BASE	FZSA	Y	T	F
	KASESE	FZOS	Y	T	F
	KINDU	FZOA	Y	T	F
KINSHASA/N'DJILI		FZAA	Y	X	F
	KINSHASA/N'DOLO	FZAB	Y	T	F
KISANGANI-BANGOKA		FZIC			F
LUBUMBASHI-LUANO		FZQA			F
	MALEBO	FZBN	Y	T	F
	MBANDAKA	FZEA	Y	T	F
MBUJI-MAYI		FZWA			F
Djibouti					
DJIBOUTI/AMBOULI		HDAM	Y	T	F
Egypt					
	ABU SIMBEL	HEBL	Y	T	F
ALEXANDRIA / INTL		HEAX	Y	T	F
ALMAZA AFB / MILITARY		HEAZ			F
ASWAN / INTL		HESN	Y	T	F
ASYUT / INTL		HEAT			F
	BORG EL ARAB / INTL	HEBA		T	F
CAIRO/INTL		HECA	Y	T	F
	EL ARISH / INTL	HEAR		T	F
HURGHADA / INTL		HEGN	Y	T	F
LUXOR / INTL		HELX	Y	T	F

Aerodrome where service is to be provided			OPMET to be provided		
Listed in AOP Tables	**Not Listed in AOP Tables**	**ICAO Location Indicator**	**SA/SP**	**TAF**	**Availabilit**
1	**2**	**3**	**4**	**5**	**6**
	MARSA ALAM / INTL	HEMA	Y	T	F
MERSA MATRUH		HEMM		T	F
	PORT SAID/ INTL	HEPS	Y	T	F
SHARK EL OWEINAT/INTL		HEOW			F
SHARM EL SHEIKH / INTL		HESH		T	F
ST.CATHERINE / INTL		HESC		T	F
TABA / INTL		HETB		T	F
Equatorial Guinea					
	BATA	FGBT	Y		F
MALABO		FGSL	Y	~~T~~ X	F
Eritrea					
ASMARA AIS/APP/COM/MET/TWR		HHAS	Y	T	F
ASSAB		HHSB	Y		F
Ethiopia					
ADDIS ABABA/BOLE COM/MET/NOF		HAAB	Y	X	F
DIRE DAWA		HADR	Y	T	F
Gabon					
FRANCEVILLE/MVENGUE		FOON			F
LIBREVILLE/LEON M'BA		FOOL	Y	X	F
	MOANDA	FOOD	Y		F
PORT-GENTIL		FOOG			F
Gambia					
BANJUL INTERNATIONAL		GBYD		X	F
Ghana					
ACCRA/KOTOKA INTERNATIONAL		DGAA	Y	X	F
KUMASI		DGSI			F
	TAKORADI	**DGTK**	**Y**	**T**	
TAMALE		DGLE			F
Guinea					
	BOKE/BARALANDE	GUOK	Y	T	F
CONAKRY/GBESSIA		GUCY	Y	X	F
	FARANAH/BADALA	GUFH	Y		F
KANKAN/KANKAN		GUXN			F
LABE/TATA		GULB			F
N'ZEREKORE/KONIA		GUNZ			F
Guinea-Bissau					
BISSAU/OSWALDO VIEIRA INTL		GGOV	Y	T	F
Ile de la Réunion					
SAINT DENIS GILLOT		FMEE	Y	X	F
	SAINT PIERRE/PIERREFONDS	**FMEP**	**Y**	**T**	

Aerodrome where service is to be provided			OPMET to be provided		
Listed in AOP Tables	Not Listed in AOP Tables	ICAO Location Indicator	SA/SP	TAF	Availability
1	2	3	4	5	6
Kenya					
ELDORET/INTL.		HKEL	Y	T	F
	KISUMU	HKKI	Y	T	F
	MALINDI	HKML	Y	T	F
MOMBASA/MOI INTL		HKMO	Y	T	F
NAIROBI/JOMO KENYATTA AIRPORT TWR/APP/NOF/CIVIL AIRLINES		HKJK	Y	X	F
	NAIROBI/WILSON	HKNW	Y	T	F
Lesotho					
MASERU MOSHOESHOE I		FXMM	Y	T	F
Liberia					
MONROVIA/ROBERTS INTL		GLRB	Y	T	F
	MONROVIA/SPRIGGS PAYNE	GLMR	Y	T	F
Libyan Arab Jamahiriya					
BENGHAZI/BENINA		HLLB	Y	T	F
	EL BEIDA / LABRAQ	**HLLQ**	**Y**	**T**	
	GAMAL ABD EL NASSER AIR BASE	**HLGN**	**Y**	**T**	
	GARDABYA	**HLGD**	**Y**	**T**	
	GHADAMES	HLTD	Y	T	F
	GHAT	**HLGT**	**Y**	**T**	
	HON	**HLON**	**Y**	**T**	
	KUFRA	HLKF	Y	T	F
SEBHA		HLLS			F
TRIPOLI/INTERNATIONAL		HLLT	Y	T	F
	TRIPOLI/MITIGA	**HLLM**	**Y**	**T**	
Madagascar					
ANTANANARIVO/IVATO		FMMI	Y	X	F
ANTSIRANANA/ARRACHART		FMNA	Y	T	F
MAHAJANGA/PH. TSIRANANA		FMNM	Y	T	F
NOSY-BE		FMNN			F
SAINTE-MARIE		FMMS	Y		F
TOAMASINA		FMMT	Y	T	F
TOLAGNARO		FMSD			F
	TOLIARA	**FMST**	**Y**	**T**	
Malawi					
BLANTYRE/CHILEKA		FWCL		Y	F
LILONGWE/KAMUZU INTERNATIONAL		FWKI	Y	X	F
Mali					
BAMAKO/SENOU		GABS	Y	X	F
GAO		GAGO			F
KAYES		GAKD			F
KIDAL		GAKL			F
MOPTI/AMBODEDJO		GAMB			F
NIORO		GANR			F
TOMBOUCTOU		GATB			F

Aerodrome where service is to be provided			OPMET to be provided		
Listed in AOP Tables	**Not Listed in AOP Tables**	**ICAO Location Indicator**	**SA/SP**	**TAF**	**Availabilit**
1	**2**	**3**	**4**	**5**	**6**
Mauritania					
ATAR		GQPA			F
	KAEDI	GQNK	Y		F
NEMA		GQNI			F
NOUADHIBOU		GQPP	Y	T	F
NOUAKCHOTT/AEROPORT		GQNI	Y	X	F
ZOUERATT/TAZADIT		GQPZ			F
Mauritius					
	RODRIGUES/PLAINE CORAIL AIRPORT	FIMR	Y	T	F
SIR SEEWOOSAGUR RAMGOOLAM INTERNATIONAL AIRPORT		FIMP	Y	X	F
Morocco					
AGADIR/AL MASSIRA		GMAD	Y	X	F
AL HOCEIMA/CHERIF EL IDRISSI		GMTA			V
	CASABLANCA/ANFA	**GMMC**	**Y**		
CASABLANCA/MOHAMMED V		GMMN	Y	X	F
ERRACHIDIA/MOULAY ALI CHERIF		GMFK	Y	T	F
FES/SAISS		GMFF	Y	X	F
	LAAYOUNE/HASSAN 1 Y T F	GMML	Y	T	F
MARRAKECH/MENARA		GMMX	Y	X	F
	NADOR/EL AROUI	GMMW	Y		F
OUARZAZATE		GMMZ	Y	T	F
OUJDA/ANGADS		GMFO	Y	X	F
RABAT/SALE		GMME	Y	X	F
TANGER/IBN BATOUTA		GMTT	Y	X	F
TAN-TAN/PLAGE BLANCHE		GMAT			F
TETOUAN/SANIAT R'MEL		GMTN			F
Mozambique					
BEIRA		FQBR	Y	T	F
	CHIMOIO	**FQCH**	**Y**	**T**	
	INHAMBANE	**FQIN**	**Y**	**T**	
	LICHINGA	**FQLC**	**Y**	**T**	
MAPUTO		FQMA	Y	X	F
	NAMPULA	FQNP	Y	T	F
	PEMBA	**FQPB**	**Y**	**T**	
	QUELIMANE	FQQL	Y	T	F
	TETE/CHINGODZI	FQTT	Y	T	F
	VILANKULO	**FQVL**	**Y**	**T**	
Namibia					
	GROOTFONTEIN	**FYGF**	**Y**	**T**	
HOSEA KUTAKO INTL AIRPORT		FYWH	Y	X	F
KEETMANSHOOP		FYKT			F
	ONDANGWA	**FYOA**	**Y**	**T**	
WALVIS BAY		FYWB			F
	WINDHOEK/EROS	**FYWE**	**Y**	**T**	

Aerodrome where service is to be provided			OPMET to be provided		
Listed in AOP Tables	Not Listed in AOP Tables	ICAO Location Indicator	SA/SP	TAF	Availabilit
1	2	3	4	5	6
Niger					
AGADES SUD		DRZA			F
	MARADI	**DRRM**	Y		
NIAMEY		DRRN	Y	X	F
	TAHOUA	**DRRT**	**Y**		
ZINDER		DRZR			F
Nigeria					
ABUJA		DNAA	Y	X	F
	BENIN	DNBE	Y	T	F
CALABAR		DNCA			F
	ENUGU	DNEN	Y	T	F
	IBADAN (NEW)	DNIB	Y	T	F
ILORIN		DNIL			F
	JOS	DNJO	Y	T	F
KADUNA (NEW)		DNKA			F
KANO/MALLAM AMINU KANO		DNKN	Y	X	F
LAGOS/MURTALA MUHAMMED		DNMM	Y	X	F
MAIDUGURI		DNMA			F
	MINNA	**DNMN**	**Y**		
	OWERRI	**DNIM**	**Y**	**T**	
PORT HARCOURT		DNPO	Y	X	F
SOKOTO		DNSO			F
	YOLA	**DNYO**	**Y**	**T**	
Réunion (France)					
SAINT DENIS GILLOT		FMEE	Y	X	F
Rwanda					
	KAMEMBE	**HRZA**	**Y**	**T**	
KIGALI/GREGOIRE KAYIBANDA (ATC/RCC/DNA/NOF/MET)		HRYR	Y	T	F
Sao Tome and Principe					
SAO TOME/INTERNATIONAL,SAO TOME ISLAND		FPST	Y	X	F
Senegal					
CAP SKIRING		GOGS			F
DAKAR/YOFF		GOOY	Y	X	F
SAINT LOUIS		GOSS			F
TAMBACOUNDA		GOTT			F
ZIGUINCHOR		GOGG			F
Seychelles					
SEYCHELLES INTERNATIONAL		FSIA	Y	T	F
Sierra Leone					
FREETOWN/LUNGI		GFLL	Y	X	F
Somalia					
BERBERA		HCMI			F
BURAO		HCMV			F
EGAL INTERNATIONAL AIRPORT		HCMH			F

KISIMAYU		HCMK			F
MOGADISHU		HCMM	Y	T	F
South Africa					
	ALEXANDER BAY	FAAB	Y		F
BLOEMFONTEIN (BLOEMFONTEIN AIRPORT)		FABL	Y	T	F
CAPE TOWN (CAPE TOWN INTERNATIONAL AIRPORT)		FACT	Y	X	F
DURBAN (DURBAN INTERNATIONAL AIRPORT)		FADN	Y	X	F
	EAST LONDON	FAEL	Y	T	F
	GEORGE (GEORGE AIRPORT)	FAGG	Y	T	F
	HOEDSPRUIT AFB	**FAHS**	**Y**	**T**	
	KIMBERLEY (KIMBERLEY AIRPORT)	FAKM	Y	T	F
	KRUGER MPUMALANGA INT	**FAKN**	**Y**	**T**	
LANSERIA		FALA			F
MAFIKENG INTL. AD		FAMM			F
	MAKHADO	**FALM**	**Y**	**T**	
NELSPRUIT		FANS			F
O.R TAMBO INTERNATIONAL AIRPORT		FAJS	Y	X	F
	PIETERMARITZBURG	**FAPM**	**Y**	**T**	
	PILANESBERG	**FAPN**	**Y**	**T**	
PIETERSBURG (CIVIL)		FAPI			F
PORT ELIZABETH (PORT ELIZABETH AIRPORT)		FAPE			F
	POLOKWANE INTERNATIONAL	**FAPP**	**Y**	**T**	
	PRETORIA/WONDERBOOM	**FAWB**	**Y**	**T**	
	RAND	FAGM	Y		F
	RICHARDS BAY	**FARB**	**Y**	**T**	
	UMTATA	**FAUT**	**Y**	**T**	
UPINGTON		FAUP			F
	WATERKLOOF (SAAF)	FAWK			F
Spain					
MELILLA		GEML			F
Sudan					
	DONGOLA/DONGOLA	HSDN	Y	T	F
	EL OBEID/EL OBEID INTERNATIONAL	HSOB	Y	T	F
JUBA/JUBA		HSSj			F
KASSALA/KASSALA		HSKA			F
KHARTOUM/KHARTOUM (CIVIL AVIATION DEPT.)		HSSS	Y	T	F
	MALAKAL	**HSSM**	**Y**	**T**	
PORT SUDAN/PORT SUDAN		HSPN			F
Swaziland					
MANZINI/MATSAPHA		FDMS	Y	T	F
Togo					
AEROPORT INTERNATIONAL GNASSINGBE EYADEMA		DXXX	Y	X	F
NIAMTOUGOU		DXXG	Y		F
	SOKODE Y F	DXSK	Y		F
Tunisia					
DJERBA/ZARZIS		DTTJ	Y	T	F
	EL BORMA	**DTTR**	**Y**	**T**	
	GABES Y	DTTG	Y	C	F
	GAFSA/KSAR	DTTF	Y	C	F
MONASTIR/HABIB BOURGUIBA		DTMB	Y	T	F
SFAX/THYNA		DTTX	Y		F
TABARKA/7 NOVEMBRE		DTKA	Y		F

TOZEUR/NEFTA		DTTZ	Y	T	F
TUNIS/CARTHAGE		DTTA	Y	T	F
Uganda					
ENTEBBE (INTL)		HUEN	Y	X	F
	MASINDI	**HUMI**	**Y**		
United Republic of Tanzania					
DAR ES SALAAM APP, TWR, NOF, MET, COM, CIVIL AIRLINES		HTDA	Y	X	F
	DODOMA	**HTDO**	**Y**		
	KIGOMA	**HTKA**	**Y**		
KILIMANJARO APP, TWR, AIS,MET, CIVIL AIRLINES		HTKJ	Y	T	F
	MBEYA	**HTMB**	**Y**		
	MTWARA	**HTMT**	**Y**		
	MWANZA	HTMW	Y	T	F
	PEMBA	**HTPE**	**Y**		
	SHINYANGA/IBADAKULI	**HTSY**	**Y**		
	SONGEA	**HTSO**	**Y**		
	TABORA	**HTTB**	**Y**		
	TANGA	HTTG	Y	T	F
ZANZIBAR - KISAUNI		HTZA	Y	T	F
Western Sahara					
EL AAIUN		GSAI			F
VILLACISNEROS		GSAI			F
Zambia					
	KASAMA	**FLKS**	**Y**		
LIVINGSTONE		FLLI			F
LUSAKA/INTL		FLLS	Y	X	F
MFUWE		FLMF			F
	MONGU	**FLMG**	**Y**		
NDOLA		FLND			F
Zimbabwe					
	CHIREDZI/BUTALO RANGE	**FVCZ**	**Y**	**T**	
	GWERU/THORNHIL	**FVTL**	**Y**	**T**	
HARARE INTERNATIONAL		FVHA	Y	X	F
	HWANGE NATIONAL PARK		**Y**	**T**	
	KARIBA		**Y**	**T**	
	MASVINGO		**Y**	**T**	
J.M. NKOMO		FVBU			F
VICTORIA FALLS		FVHA			F

APPENDIX G

UPDATED FASID TABLE MET 1A

METEOROLOGICAL SERVICES REQUIRED AT AERODROMES

EXPLANATION OF THE TABLE

Column

1 Name of the aerodrome or location where meteorological service is required

Note: The name is extracted from the ICAO Location Indicators (Doc 7910) updated quarterly. If a state wishes to change the name appearing in Doc 7910 and this table, ICAO should be notified officially.

2 ICAO location indicator of the aerodrome

3 Designation of aerodrome:
RG - international general aviation, regular use
RS - international scheduled air transport, regular use
RNS - international non-scheduled air transport, regular use
AS - international scheduled air transport, alternate use
ANS - international non-scheduled air transport, alternate use

4 Name of the meteorological office responsible for the provision of meteorological service at the aerodrome indicated in column 1

5 ICAO location indicator of the responsible meteorological office

6 Requirement for trend forecasts

7 Requirement for aerodrome forecasts in TAF code

C - Requirement for 9-hour validity aerodrome forecasts in TAF code (9H)
T - Requirement for 18/24-hour validity aerodrome forecasts in TAF code (18/24H)
X - Requirement for 30-hour validity aerodrome forecasts in TAF code (30H)

8 Availability of OPMET information

F - Full : OPMET data as listed issued for the aerodrome all through the 24-hour period
P - Partial : OPMET data as listed not issued for the aerodrome for the entire 24-hour period
N - None : No OPMET data issued for the time being

MET 1A - AFI

Aerodrome where service is to be provided Responsible MET Office			Responsible MET Office		Forecasts to be provided		Availability of OPMET
Name	ICAO Location Indicator	Use	Name	ICAO Location Indicator	TR	TAF	
1	2	3	4	5	6	7	8
Algeria							
ADRAR/TOUAT-CHEIKH SIDI MOHAMED BELKEBIR	DAUA	RS	ADRAR/TOUAT-CHEIKH SIDI MOHAMED BELKEBIR	DAUA			F
ALGER/HOUARI BOUMEDIENE	DAAG	RS	ALGER/HOUARI BOUMEDIENE	DAAG	Y	T	F
ANNABA/RABAH BITAT	DABB	RS	ANNABA/RABAH BITAT	DABB	Y	T	F
CONSTANTINE/MED BOUDIAF	DABC	RS	CONSTANTINE/MED	DABC		T	F
GHARDAIA/NOUMERAT-MOUFDI ZAKARIA	DAUG	RS	GHARDAIA/NOUMERAT-MOUFDI ZAKARIA	DAUG			F
HASSI MESSAOUD/OUED	DAUH	RS	HASSI MESSAOUD/OUED	DAUH			F
IRARA-KRIM BELKACEM IN SALAH	DAUI	RS	IRARA-KRIM BELKACEM IN SALAH	DAUI			F
ORAN/ES SENIA	DAOO	RS	ORAN/ES SENIA	DAOO	Y	T	F
TAMANRASSET/AGUENAR	DAAT	AS	TAMANRASSET/AGUENAR	DAAT		T	F
TEBESSA/CHEIKH LARBI TEBESSI	DABS	RS	TEBESSA/CHEIKH LARBI TEBESSI	DABS			F
TLEMCEN/ZENATA-MESSALI EL HADJ	DAON	RS	TLEMCEN/ZENATA-MESSALI EL HADJ	DAON		T	F
ZARZAITINE/IN AMENAS	DAUZ	RS	ZARZAITINE/IN AMENAS	DAUZ			F
Angola							
HUAMBO	FNHU	RS	LUANDA/4 DE FEVEREIRO	FNLU			F
LUANDA/4 DE FEVEREIRO	FNLU	RS	LUANDA/4 DE FEVEREIRO	FNLU	Y	X	F
Benin							
COTONOU/CADJEHOUN	DBBB	RS	COTONOU/CADJEHOUN	DBBB	Y	X	F
Botswana							
FRANCISTOWN	FBFT	RS	GABORONE/SIR Seretse Khama Intl	FBSK	Y	T	F
GABORONE/SIR Seretse Khama Intl	FBSK	RS	GABORONE/SIR Seretse Khama Intl	FBSK	Y	X	F
KASANE	FBKE	RS	GABORONE/SIR Seretse Khama Intl	FBSK	Y	T	F
MAUN	FBMN	RS	GABORONE/SIR Seretse Khama Intl	FBSK	Y	T	F
SELIBE-PHIKWE	FBSP	RS	GABORONE/SIR Seretse Khama Intl	FBSK F	Y	T	F
Burkina Faso							
BOBO DIOULASSO	DFOO	RS	OUAGADOUGOU/AEROPORT	DFFD			F
OUAGADOUGOU/AEROPORT	DFFD	RS	OUAGADOUGOU/AEROPORT	DFFD	Y	X	F
Burundi							
BUJUMBURA	HBBA				Y	T	F
Cameroon							
DOUALA/AEROPORT	FKKD	RS	DOUALA/AEROPORT	FKKD	Y	X	F
GAROUA	FKKR	AS	GAROUA	FKKR	Y		F
MAROUA/SALAK	FKKL	RS	DOUALA/AEROPORT	FKKD			F
N'GAOUNDERE	FKKN	RS	DOUALA/AEROPORT	FKKD			F
YAOUNDE/NSIMALEN	FKYS	RS	YAOUNDE/NSIMALEN	FKYS	Y	T	F
Canary Islands (Spain)							
FUERTEVENTURA	GCFV	RS	GRAN CANARIA T F	GCLP		T	F
GRAN CANARIA	GCLP	RS	GRAN CANARIA	GCLP	Y	T	F
HIERRO	GCHI	RS	GRAN CANARIA	GCLP			F
LA PALMA	GCLA	RS	GRAN CANARIA	GCLP			F

Aerodrome where service is to be provided Responsible MET Office			Responsible MET Office		Forecasts to be provided		Availability of OPMET
Name	ICAO Location Indicator	Use	Name	ICAO Location Indicator	TR	TAF	
1	2	3	4	5	6	7	8
LANZAROTE	GCRR	RS	GRAN CANARIA	GCLP		T	F
TENERIFE NORTE (AD CIVIL)	GCXO	RS	TENERIFE NORTE (AD CIVIL)	GCXO	Y	T	F
TENERIFE SUR/REINA SOFIA	GCTS	RS	TENERIFE SUR/REINA SOFIA	GCTS	Y	T	F
Cape Verde							
AMILCAR CABRAL/SAL ISLAND	GVAC	RS	AMILCAR CABRAL/SAL ISLAND	GVAC	Y	X	F
PRAIA	GVNP	RS	AMILCAR CABRAL/SAL ISLAND	GVAC	Y	T	F
Central African Republic							
BANGUI/M'POKO	FEFF	RS	BANGUI/M'POKO	FEFF	Y	X	F
BERBERATI	FEFT	RS	BANGUI/M'POKO	FEFF			F
Chad							
N'DJAMENA/HASSAN DJAMOUS	FTTJ	RS	N'DJAMENA/HASSAN DJAMOUS	FTTJ	Y	X	F
Comoros							
DZAOUDZI PAMANDZI	FMCZ	RS	MORONI/IHAHAIA	FMCH	Y	T	F
MORONI/IHAHAIA	FMCH	RS	MORONI/IHAHAIA	FMCH		Y	T
Congo							
BRAZZAVILLE/MAYA-MAYA	FCBB	RS	BRAZZAVILLE/MAYA-MAYA	FCBB	Y	F	F
POINTE NOIRE	FCPP	RS	POINTE NOIRE	FCPP	Y	T	F
Côte d'Ivoire							
ABIDJAN/FELIX HOUPHOUET BOIGNY	DIAP	RS	ABIDJAN/FELIX Houphouet Boigny	DIAP	Y	~~T~~ X	F
BOUAKE	DIBK	RS	ABIDJAN/FELIX Houphouet Boigny	DIAP			F
Democratic Republic of the Congo							
GOMA	FZNA	RS	KINSHASA/N'DJILI	FZAA			F
KINSHASA/N'DJILI	FZAA	RS	KINSHASA/N'DJILI	FZAA	Y	X	F
KISANGANI-BANGOKA	FZIC	AS	KINSHASA/N'DJILI	FZAA			F
LUBUMBASHI-LUANO	FZQA	AS	KINSHASA/N'DJILI	FZAA			F
MBUJI-MAYI	FZWA	AS	KINSHASA/N'DJILI	FZAA			F
Djibouti							
DJIBOUTI/AMBOULI	HDAM	RS	DJIBOUTI/AMBOULI	HDAM	Y	T	F
Egypt							
ALEXANDRIA / INTL	HEAX	RS	CAIRO/INTL	HECA	Y	T	F
ALMAZA AFB / MILITARY	HEAZ	RNS					F
ASWAN / INTL	HESN	RS	CAIRO/INTL	HECA	Y	T	F
ASYUT / INTL	HEAT	RS					F
CAIRO/INTL	HECA		CAIRO/INTL	HECA	Y	T	F
HURGHADA / INTL	HEGN	RS	CAIRO/INTL	HECA	Y	T	F
LUXOR / INTL	HELX	RS	CAIRO/INTL	HECA	Y	T	F
MERSA MATRUH	HEMM	RS	CAIRO/INTL	HECA		T	F
SHARK EL OWEINAT/INTL	HEOW	AS					F
SHARM EL SHEIKH / INTL	HESH	RS	CAIRO/INTL	HECA		T	F
ST.CATHERINE / INTL	HESC	AS	CAIRO/INTL	HECA		T	F
TABA / INTL	HETB	RS	CAIRO/INTL	HECA		T	F

Aerodrome where service is to be provided Responsible MET Office			Responsible MET Office		Forecasts to be provided		Availability of OPMET
Name 1	ICAO Location Indicator 2	Use 3	Name 4	ICAO Location Indicator 5	TR 6	TAF 7	8
Equatorial Guinea							
MALABO	FGSL	RS	MALABO	FGSL	Y	~~T~~ X	F
Eritrea							
ASMARA AIS/APP/COM/MET/TWR	HHAS	RS	ASMARA AIS/APP/COM/MET/TWR	HHAS	Y	T	F
ASSAB	HHSB	RS	ASSAB	HHSB	Y		F
Ethiopia							
ADDIS ABABA/BOLE COM/MET/NOF	HAAB	RS	ADDIS ABABA/BOLE COM/MET/NOF	HAAB	Y	X	F
DIRE DAWA	HADR	RS	ADDIS ABABA/BOLE COM/MET/NOF	HAAB	Y	T	F
Gabon							
FRANCEVILLE/MVENGUE	FOON	RS	LIBREVILLE/LEON M'BA F	FOOL			F
LIBREVILLE/LEON M'BA	FOOL	RS	LIBREVILLE/LEON M'BA	FOOL	Y	X	F
PORT-GENTIL	FOOG	RS	LIBREVILLE/LEON M'BA F	FOOL			F
Gambia							
BANJUL INTERNATIONAL	GBYD	RS	BANJUL INTERNATIONAL	GBYD		X	F
Ghana							
ACCRA/KOTOKA INTERNATIONAL	DGAA	RS	ACCRA/KOTOKA INTERNATIONAL	DGAA	Y	X	F
KUMASI	DGSI	RS	ACCRA/KOTOKA INTERNATIONAL	DGAA			F
TAMALE	DGLE	RS	ACCRA/KOTOKA INTERNATIONAL	DGAA			F
Guinea							
CONAKRY/GBESSIA	GUCY	RS	CONAKRY/GBESSIA	GUCY	Y	X	F
KANKAN/KANKAN	GUXN	RS	CONAKRY/GBESSIA	GUCY			F
LABE/TATA	GULB	RS	CONAKRY/GBESSIA	GUCY			F
N'ZEREKORE/KONIA	GUNZ	RS	CONAKRY/GBESSIA	GUCY			F
Guinea-Bissau							
BISSAU/OSWALDO VIEIRA INTL	GGOV	RS	BISSAU/OSWALDO VIEIRA INTL	GGOV	Y	T	F
Kenya							
ELDORET/INTL.	HKEL	RS	ELDORET/INTL.	HKEL	Y	T	F
MOMBASA/MOI INTL	HKMO	RS	MOMBASA/MOI INTL	HKMO	Y	T	F
NAIROBI/JOMO KENYATTA AIRPORT TWR/APP/NOF/CIVIL AIRLINES	HKJK	RS	NAIROBI/JOMO KENYATTA AIRPORT TWR/APP/NOF/CIVIL AIRLINES	HKJK	Y	X	F
Lesotho							
MASERU MOSHOESHOE I	FXMM	RS	MASERU MOSHOESHOE I Y T F	FXMM	Y	T	F
Liberia							
MONROVIA/ROBERTS INTL	GLRB	RS	MONROVIA/ROBERTS INTL	GLRB	Y	T	F

Aerodrome where service is to be provided Responsible MET Office			Responsible MET Office		Forecasts to be provided		Availability of OPMET
Name	ICAO Location Indicator	Use	Name	ICAO Location Indicator	TR	TAF	
1	2	3	4	5	6	7	8
Libyan Arab Jamahiriya							
BENGHAZI/BENINA	HLLB	RS	BENGHAZI/BENINA	HLLB	Y	T	F
SEBHA	HLLS	RS	BENGHAZI/BENINA	HLLB			F
TRIPOLI/INTERNATIONAL	HLLT	RS	TRIPOLI/INTERNATIONAL	HLLT	Y	T	F
Madagascar							
ANTANANARIVO/IVATO	FMMI	RS	ANTANANARIVO/IVATO	FMMI	Y	X	F
ANTSIRANANA/ARRACHART	FMNA			FMMI	Y	T	F
MAHAJANGA/PH. TSIRANANA	FMNM	RS	MAHAJANGA/PH. TSIRANANA Y T F	FMNM	Y	T	F
NOSY-BE	FMNN	RS	MAHAJANGA/PH. TSIRANANA	FMNM			F
SAINTE-MARIE	FMMS	RS	TOAMASINA	FMMT	Y		F
TOAMASINA	FMMT	RS	TOAMASINA	FMMT	Y	T	F
TOLAGNARO	FMSD	RS	ANTANANARIVO/IVATO	FMMI			F
Malawi							
BLANTYRE/CHILEKA	FWCL	RS	BLANTYRE/CHILEKA	FWCL		Y	F
LILONGWE/KAMUZU INTERNATIONAL	FWKI	RS	LILONGWE/KAMUZU INTERNATIONAL	FWKI	Y	X	F
Mali							
BAMAKO/SENOU	GABS	RS	BAMAKO/SENOU	GABS	Y	X	F
GAO	GAGO	RS	BAMAKO/SENOU	GABS			F
KAYES	GAKD	RS	BAMAKO/SENOU	GABS			F
KIDAL	GAKL	RS	BAMAKO/SENOU	GABS			F
MOPTI/AMBODEDJO	GAMB	RS	BAMAKO/SENOU	GABS			F
NIORO	GANR	RS	BAMAKO/SENOU	GABS			F
TOMBOUCTOU	GATB	RS	BAMAKO/SENOU	GABS			F
Mauritania							
ATAR	GQPA	RS	NOUAKCHOTT/AEROPORT	GQNN			F
NEMA	GQNI	RS	NOUAKCHOTT/AEROPORT	GQNN			F
NOUADHIBOU	GQPP	RS	NOUADHIBOU	GQPP	Y	T	F
NOUAKCHOTT/AEROPORT	GQNN	RS	NOUAKCHOTT/AEROPORT	GQNN	Y	X	F
ZOUERATT/TAZADIT	GQPZ	RS	NOUAKCHOTT/AEROPORT	GQNN			F
Mauritius							
SIR SEEWOOSAGUR RAMGOOLAM INTERNATIONAL AIRPORT	FIMP	RS	SIR SEEWOOSAGUR RAMGOOLAM INTERNATIONAL AIRPORT	FIMP	Y	X	F
Morocco							
AGADIR/AL MASSIRA	GMAD	RS	AGADIR/AL MASSIRA	GMAD	Y	X	F
AL HOCEIMA/CHERIF EL IDRISSI	GMTA	RS	CASABLANCA/MOHAMMED V	GMMN			V
CASABLANCA/MOHAMMED V	GMMN	RS	CASABLANCA/MOHAMMED V	GMMN	Y	X	F
ERRACHIDIA/MOULAY ALI CHERIF	GMFK	RS	CASABLANCA/MOHAMMED V	GMMN	Y	T	F
FES/SAISS	GMFF	RS	FES/SAISS	GMFF	Y	X	F
MARRAKECH/MENARA	GMMX	RS	MARRAKECH/MENARA	GMMX	Y	X	F
OUARZAZATE	GMMZ	RS	CASABLANCA/MOHAMMED V	GMMN	Y	T	F
OUJDA/ANGADS	GMFO	RS	OUJDA/ANGADS	GMFO	Y	X	F
RABAT/SALE	GMME	RS	RABAT/SALE	GMME	Y	X	F
TANGER/IBN BATOUTA	GMTT	RS	TANGER/IBN BATOUTA	GMTT	Y	X	F

Aerodrome where service is to be provided Responsible MET Office			Responsible MET Office		Forecasts to be provided		Availability of OPMET
Name	ICAO Location Indicator	Use	Name	ICAO Location Indicator	TR	TAF	
1	2	3	4	5	6	7	8
TAN-TAN/PLAGE BLANCHE	GMAT	RS	CASABLANCA/MOHAMMED V	GMMN			F
TETOUAN/SANIAT R'MEL	GMTN	RS	TANGER/IBN BATOUTA	GMTT			F
Mozambique							
BEIRA	FQBR	RS	BEIRA	FQBR	Y	T	F
MAPUTO	FQMA	RS	MAPUTO	FQMA	Y	X	F
Namibia							
HOSEA KUTAKO INTL AIRPORT	FYWH	RS	HOSEA KUTAKO INTL AIRPORT	FYWH	Y	X	F
KEETMANSHOOP	FYKT	RS	HOSEA KUTAKO INTL AIRPORT	FYWH			F
WALVIS BAY	FYWB	RS	HOSEA KUTAKO INTL AIRPORT	FYWH			F
Niger							
AGADES SUD	DRZA	RS	NIAMEY	DRRN			F
NIAMEY	DRRN	RS	NIAMEY	DRRN	Y	X	F
ZINDER	DRZR	RS	NIAMEY	DRRN			F
Nigeria							
ABUJA	DNAA	RS	KANO/MALLAM AMINU KANO	DNKN	Y	X	F
CALABAR	DNCA	RS	LAGOS/MURTALA MUHAMMED	DNMM			F
ILORIN	DNIL	RS	LAGOS/MURTALA MUHAMMED	DNMM			F
KADUNA (NEW)	DNKA	RS	KATSINA	DNKT			F
KANO/MALLAM AMINU KANO	DNKN	RS	KANO/MALLAM AMINU KANO	DNKN	Y	X	F
LAGOS/MURTALA MUHAMMED	DNMM	RS	LAGOS/MURTALA MUHAMMED	DNMM	Y	X	F
MAIDUGURI	DNMA	RS	KANO/MALLAM AMINU KANO	DNKN			F
PORT HARCOURT	DNPO	RS	LAGOS/MURTALA MUHAMMED	DNMM	Y	X	F
SOKOTO	DNSO	RS	KANO/MALLAM AMINU KANO	DNKN			F
Réunion (France)							
SAINT DENIS GILLOT	FMEE	RS	SAINT DENIS GILLOT	FMEE	Y	X	F
Rwanda							
KIGALI/GREGOIRE KAYIBANDA (ATC/RCC/DNA/NOF/MET)	HRYR	RS	KIGALI/GREGOIRE KAYIBANDA (ATC/RCC/DNA/NOF/MET)	HRYR	Y	T	F
Sao Tome and Principe							
SAO TOME/INTERNATIONAL,SAO TOME ISLAND	FPST	RS	SAO TOME/INTERNATIONAL,SAO TOME ISLAND	FPST	Y	X	F
Senegal							
CAP SKIRING	GOGS	RS	DAKAR/YOFF	GOOY			F
DAKAR/YOFF	GOOY	RS	DAKAR/YOFF	GOOY	Y	X	F
SAINT LOUIS	GOSS	RS	DAKAR/YOFF	GOOY			F
TAMBACOUNDA	GOTT	RS	DAKAR/YOFF	GOOY			F
ZIGUINCHOR	GOGG	RS	DAKAR/YOFF	GOOY			F
Seychelles							
SEYCHELLES INTERNATIONAL	FSIA	RS	SEYCHELLES INTERNATIONAL	FSIA	Y	T	F

Aerodrome where service is to be provided Responsible MET Office			Responsible MET Office		Forecasts to be provided		Availability of OPMET
Name	ICAO Location Indicator	Use	Name	ICAO Location Indicator	TR	TAF	
1	2	3	4	5	6	7	8
Sierra Leone							
FREETOWN/LUNGI	GFLL	RS	FREETOWN/LUNGI	GFLL	Y	X	F
Somalia							
BERBERA	HCMI	AS	MOGADISHU	HCMM			F
BURAO	HCMV	RS	MOGADISHU	HCMM			F
EGAL INTERNATIONAL AIRPORT	HCMH	RS	MOGADISHU	HCMM			F
KISIMAYU	HCMK	AS	MOGADISHU	HCMM			F
MOGADISHU	HCMM	RS	MOGADISHU	HCMM	Y	T	F
South Africa							
BLOEMFONTEIN (BLOEMFONTEIN AIRPORT)	FABL	RS	BLOEMFONTEIN (BLOEMFONTEIN AIRPORT)	FABL	Y	T	F
CAPE TOWN (CAPE TOWN INTERNATIONAL AIRPORT)	FACT	RS	CAPE TOWN (CAPE TOWN INTERNATIONAL AIRPORT)	FACT	Y	X	F
DURBAN (DURBAN INTERNATIONAL AIRPORT)	FADN	RS	DURBAN (DURBAN INTERNATIONAL AIRPORT)	FADN	Y	X	F
LANSERIA	FALA	RS	O.R TAMBO INTERNATIONAL AIRPORT	FAJS			F
MAFIKENG INTL. AD	FAMM	AS	O.R TAMBO INTERNATIONAL AIRPORT	FAJS			F
NELSPRUIT	FANS	RS	GROOTFONTEIN	FAGF			F
O.R TAMBO INTERNATIONAL AIRPORT	FAJS	RS	O.R TAMBO INTERNATIONAL AIRPORT	FAJS	Y	X	F
PIETERSBURG (CIVIL)	FAPI	AS	O.R TAMBO INTERNATIONAL AIRPORT	FAJS			F
PORT ELIZABETH (PORT ELIZABETH AIRPORT)	FAPE	AS	O.R TAMBO INTERNATIONAL AIRPORT	FAJS			F
UPINGTON	FAUP	AS	O.R TAMBO INTERNATIONAL AIRPORT	FAJS			F
Spain							
MELILLA	GEML	RS	MELILLA	GEML			F
Sudan							
JUBA/JUBA	HSSJ	RS	KHARTOUM/KHARTOUM (CIVIL AVIATION DEPT.)	HSSS			F
KASSALA/KASSALA	HSKA	AS	KHARTOUM/KHARTOUM (CIVIL AVIATION DEPT.)	HSSS			F
KHARTOUM/KHARTOUM (CIVIL AVIATION DEPT.)	HSSS	RS	KHARTOUM/KHARTOUM (CIVIL AVIATION DEPT.)	HSSS	Y	T	F
PORT SUDAN/PORT SUDAN	HSPN	RS	WADI/NUBA LAKE	HSSW			F
Swaziland							
MANZINI/MATSAPHA	FDMS	RS	MANZINI/MATSAPHA	FDMS	Y	T	F
Togo							
AEROPORT INTERNATIONAL GNASSINGBE EYADEMA	DXXX	RS	AEROPORT INTERNATIONAL GNASSINGBE EYADEMA	DXXX	Y	X	F
NIAMTOUGOU	DXNG	RS	AEROPORT INTERNATIONAL GNASSINGBE EYADEMA	DXXX	Y		F

Aerodrome where service is to be provided Responsible MET Office			Responsible MET Office		Forecasts to be provided		Availability of OPMET
Name	ICAO Location Indicator	Use	Name	ICAO Location Indicator	TR	TAF	
1	2	3	4	5	6	7	8
Tunisia							
DJERBA/ZARZIS	DTTJ	RS	TUNIS/CARTHAGE	DTTA	Y	T	F
MONASTIR/HABIB BOURGUIBA	DTMB	RS	TUNIS/CARTHAGE	DTTA	Y	T	F
SFAX/THYNA	DTTX	RS	TUNIS/CARTHAGE	DTTA	Y		F
TABARKA/7 NOVEMBRE	DTKA	RS	TUNIS/CARTHAGE	DTTA	Y		F
TOZEUR/NEFTA	DTTZ	RS	TABARKA/7 NOVEMBRE	DTKA	Y	T	F
TUNIS/CARTHAGE	DTTA	RS	TUNIS/CARTHAGE	DTTA	Y	T	F
Uganda							
ENTEBBE (INTL)	HUEN	RS	ENTEBBE (INTL)	HUEN	Y	X	F
United Republic of Tanzania							
DAR ES SALAAM APP, TWR, NOF, MET, COM, CIVIL AIRLINES	HTDA	RS	DAR ES SALAAM APP, TWR, NOF, MET, COM, CIVIL AIRLINES	HTDA	Y	X	F
KILIMANJARO APP, TWR, AIS,MET, CIVIL AIRLINES	HTKJ	RS	KILIMANJARO APP, TWR, AIS,MET, CIVIL AIRLINES	HTKJ	Y	T	F
ZANZIBAR - KISAUNI	HTZA	RS	ZANZIBAR - KISAUNI	HTZA	Y	T	F
Western Sahara							
EL AAIUN	GSAI	RS	EL AAIUN	GSAI			F
VILLACISNEROS	GSVO	RS	EL AAIUN	GSAI			F
Zambia							
LIVINGSTONE	FLLI	RS	LUSAKA/INTL	FLLS			F
LUSAKA/INTL	FLLS	RS	LUSAKA/INTL	FLLS	Y	X	F
MFUWE	FLMF	AS	LUSAKA/INTL	FLLS			F
NDOLA	FLND	AS	LUSAKA/INTL	FLLS			F
Zimbabwe							
HARARE INTERNATIONAL	FVHA	RS	HARARE INTERNATIONAL	FVHA	Y	X	F
J.M. NKOMO	FVBU	RS	J.M. NKOMO	FVBU			F
VICTORIA FALLS	FVFA	RS	HARARE INTERNATIONAL	FVHA			F

APPENDIX H

MANAGEMENT OF OPMET EXCHANGE UNDER THE AMBEX SCHEME

1 OPMET Bulletins Update Procedure

1.1 Information for changes of AMBEX bulletins should be disseminated to all AMBEX centres and national OPMET centres (NOC) concerned well in advance in order to allow the centres to introduce the necessary changes to their message handling systems. In this regard, a lead time period of two AIRAC cycles is considered appropriate.

1.2 The AMBEX centre planning the change, should send a notification by e-mail or fax to the ICAO Office, Dakar or Nairobi with copy to all AMBEX Focal Points. The notification should include detailed information of the changes and the proposed time schedule. The Regional Office should inform all other ICAO Regional Offices of the changes to be introduced and the effective date of implementation.

1.3 All requests by users for changes to AMBEX bulletins should be addressed to the ICAO Regional Office concerned. The Regional Office should carry out the necessary coordination with the Sates and AMBEX centres concerned. The duration of the coordination process should be minimized so that the period between the user request and the implementation of the change (if agreed) should normally be less than 3 months.

2 Quality Management of OPMET Exchange under the AMBEX Scheme

2.1 Objectives and Scope

2.1.1 **Objectives:** Develop a management system that provides general guidance on procedures applied to OPMET exchange, which includes quality control aspects and introduces a non-real-time monitoring for OPMET exchange.

2.1.2 **Scope:** Management of OPMET data exchange will be organized in the following sections:

Quality Control	***Data quality control applies to OPMET validation and correction during data processing and during preparation of messages***
OPMET monitoring	***Monitor and evaluate the performance indicators for the scheduled OPMET data***

2.2 Quality Control – General Requirements

2.2.1 Quality control (QC) consists of examination of OPMET data at NOCs, AMBEX Centres and RODBs to check the messages for formatting and coding errors, as well as, for time and space consistency.

2.2.2 OPMET data should be checked in real time or as close to it as possible, at the first point, i.e., the originator, which may be: meteorological station, aerodrome meteorological office or meteorological watch office. Errors may occur during coding or

transcription of meteorological messages by the observer or forecaster. The originating office should apply quality control procedures during data processing and preparation of messages, in order to eliminate the main sources of errors.

2.2.3 The national OPMET centre (NOC) should apply QC procedures on the incoming messages from national sources and on the compiled national bulletins.

2.2.4 It is also advisable to apply QC checks at the AMBEX Centre, where the AMBEX bulletins are received or compiled. If automation is available it should be used, or partly assisted by computing facilities. The principle is that every message should be checked, preferably at the various points along the data chain.

2.2.5 The checks that have already been performed by originating offices and AMBEX Centres are usually repeated at the OPMET data banks. Erroneous messages found by the RODB should be either rejected or corrected by reference back to the source or by the data bank itself. Data corrected by the data banks should be flagged in the database for record purpose.

2.2.6 As a result of the quality control process described above, OPMET data of established quality will be used in the exchange and stored in the data banks. The RODBs should compile information with regard to errors that were found and compile records, such as the numbers and types of errors detected during quality control. Such non-conformities should be reported to ICAO Regional Office, Dakar or Nairobi for follow-up action.

2.3 Quality Control Procedures

2.3.1 General guidance on the quality control procedures for each type of OPMET is outlined in **Appendix I.**

3 OPMET Monitoring

3.1 Monitoring of Scheduled OPMET Data

3.1.1 The monitoring shall focus on the measurement of three performance indicators (PIs), viz., Compliance, Availability and Regularity indices of the scheduled, routine OPMET data (SA, FT) exchanged in the region. The PIs are described in detail in **Appendix I**

3.1.2 Monitoring Reference. The monitoring shall involve the recording and analysis of data provided by the AFTN circuit. The three PIs should be monitored against the respective AMBEX Tables.

3.1.3 Methodology: Data is monitored with reference to the procedures defined in **Appendix I** the EUR OPMET Data Monitoring Procedures as produced by APIRG MET/SG (Bulletin Management Group).

3.2 Monitoring of Non-Scheduled OPMET data

3.2.1 Monitoring of non-routine OPMET data shall be executed for FK, FV, WC, WS, and

WV.

3.2.2 Monitoring of SIGMET, VAA and TCA should be performed during the scheduled regional SIGMET tests in accordance with the procedures published by the Regional Offices, Dakar and Nairobi.

3.2.3 The monitoring results shall be presented in bulletin-oriented format, one line per bulletin indicating the abbreviated header (TTAAii CCCC YGGgg), the FIR/UIR where applicable, receipt time and originator.

4 AMBEX Focal Points

4.1 In order to facilitate exchange of information between the AMBEX centres a system of AMBEX focal points have been developed. Contact details of the persons designated as AMBEX focal points by the relevant State's authorities is provided in **Attachment A** to this Appendix.

ATTACHMENT A

AMBEX FOCAL POINTS *(update ….)*

STATE/ ADMINISTRATION	NAME/DESIGNATION AND ADDRESS	TEL/FAX AND E-MAIL

APPENDIX I

OPMET Quality Control and Monitoring Procedures

1 Quality Control Procedures

1.1 OPMET Data Validation

1.1.1 The AMBEX Centres and RODBs should not modify the content of the meteorological data, e.g. visibility, QNH etc., but only items contained in the WMO bulletin headings, such as, location indicators or observation times.

1.1.2 WMO Abbreviated Heading (TTAAii CCCC YYGGgg BBB) Validation

TT	Message Type, shall comprise two alphabetical characters
AA	Location Indicator, shall comprise two alphabetical characters
ii	comprise two digits, from 01 to 99
CCCC	A 4-letter ICAO location indicator shall comprise 4 alphabetical characters
YYGGgg	The date time group of the bulletin, shall be configured to validate it with the current time
BBB	BBB is an optional group. The use of BBB group shall comply with the rules in the WMO abbreviated heading, in regard to delayed, corrected and amended bulletins.

Examples	After QC check
METAR with incorrect YYGGgg: SABM31 VYMD 100830 **UTC** VYMD 100830Z 18005KT 8000 FEW025 31/18 Q1000 =	 SABM31 VYMD **100830** VYMD 100830Z 18005KT 8000 FEW025 31/18 Q1000 =
TAF without AHL: 112324 WIDDYMYX TAF WIDD 112324Z 1200/1224 00000KT 4000 RA BKNT017 BECMG 1203/1205 20010KT 9000 SCT017=	 **FTID31 WIDD 112300** TAF WIDD 112324Z 1200/1224 00000KT 4000 RA BKNT017 BECMG 1203/1205 20010KT 9000 SCT017=
TAF with invalid BBB: FTBN31 OBBI 030525 **AMD** TAF AMD OBBI 030525Z 0306/0406 16010KT CAVOK BECMG 0308/0312 33017KT 5000 PROB30 TEMPO	 FTBN31 OBBI 030525 **AAA** TAF AMD OBBI 030525Z 0306/0406 16010KT CAVOK BECMG 0308/0312 33017KT 5000 PROB30

0308/0314 0800 DU=	TEMPO 0308/0314 0800 DU=

1.1.3 METAR/SPECI Validation

For each individual METAR or SPECI within a bulletin the following additional fields shall be validated:

Prefix checks	METAR METAR COR SPECI SPECI COR	SA SA SP SP
Observation Time YYGGggZ	The report shall have a valid date and time of observation, including the character 'Z'. In a SPECI bulletin, this group will be same as (or very close to) the YYGGgg, part of the abbreviated bulletin heading.	
End-of-message format "="	Each METAR or SPECI report shall be terminated by the "=" character.	

Examples	After QC check
METAR with Observation Time error: SAPK31 OPKC **030159** RRA OPKC **030200** 26004 8000 BKN020 27/23 Q1007 NOSIG=	 SAPK31 OPKC **030200** RRA OPKC **030200** 26004 8000 BKN020 27/23 Q1007 NOSIG=
METAR with mistyped observation time: SAID31 WADD **120100** METAR WADD **121000Z** 17004KT 9999 FEW018CB SCT120 BKN300 28/26 Q1005=	 SAXX31 WADD **120100** METAR WADD **120100Z** 17004KT 9999 FEW018CB SCT120 BKN300 28/26 Q1005=
SPECI with incorrect Message Type, TT: **SANZ31** NZKL 040000 **SPECI** NZWP 040000Z 17005KT 010V240 25KM FEW020 FEW020CB SCT035 BKN050 18/15 Q1018 NOSIG=	 **SPNZ31** NZKL 040000 AAA **SPECI** NZWP 040000Z 17005KT 010V240 25KM FEW020 FEW020CB SCT035 BKN050 18/15 Q1018 NOSIG=

1.1.4 TAF Validation

For each individual TAF within a bulletin, the following additional items shall be validated:

Prefix checks	TAF TAF COR TAF AMD	FT FT FT
Issue Time YYGGggZ	If the field is included, it shall have a valid date and time of origin of forecast including 'Z'.	
Validity $Y_1Y_1G_1G_1/Y_2Y_2G_2G_2$	Some TAFs are still produced with a 4-digit validity period. These shall be corrected by inserting a date consistent with the current date and the date time group of the bulletin header. If a TAF is received without a validity period it shall be discarded.	
End-of-Message format "="	Each forecast shall be terminated by the "=" character:	

Examples	After QC check
TAF with issue time error (wrong date): FCID31 WIII 181630 TAF WIII **041630Z** 0418/0503 00000KT 9000 FEW025 BECMG 0422/0424 16005KT=	 FCID31 WIII 181630 TAF WIII **181630Z** 0418/0503 00000KT 9000 FEW025 BECMG 0422/0424 16005KT=
TAF with mistyped Validity Period: FTPH31 RPLL 132200 TAF RPLC 132200Z **1400/1428** 04006KT 9999 SCT036 BKN300 TEMPO 1400/1406 02010KT 5000 –SHRA FEW020 BKN270 TX32/1405Z TN22/1421Z=	 FTPH31 RPLL 132200 TAF RPLC 132200Z **1400/1424** 04006KT 9999 SCT036 BKN300 TEMPO 1400/1406 02010KT 5000 –SHRA FEW020 BKN270 TX32/1405Z TN22/1421Z=
TAF with Validity error (wrong date): FCMS33 WMKK 170748 TAF WMKK 170700Z **3009/3018** 30005KT 9999 FEW017CB SCT140 BKN270=	 FCMS33 WMKK 170748 TAF WMKK 170700Z **1709/1718** 30005KT 9999 FEW017CB SCT140 BKN270=
TAF with 4-digit Validity period: FTXX31 WIDD 170121 TAF WIDD **0618** 06010G20KT 9999 SCT018 BECMG 1712/1714 00000KT 7000=	 FTXX31 WIDD 170121 TAF WIDD **1706/1718** 06010G20KT 9999 SCT018 BECMG 1712/1714 00000KT 7000

1.1.5 SIGMET Validation

CCCC on the AHL	A valid 4-letter ICAO location indicator indicating the FIR for which the SIGMET was	
Prefix checks	SIGMET for TS, CB, TURB, ICE, MTW, DS and SS	WS
	SIGMET for VA	WV
	SIGMET for TC	WC
Validity Period DDHHMM/DDHHMM	Shall have a valid period of validity. Validity periods may be corrected if: • Missing VALID string • Incorrect SIGMET number format • Incorrectly formatted validity period	
Note: For SIGMET validation, please refer to the format described in the AFI (WACAF or ESAF) Regional SIGMET Guide		

Examples	After QC check
SIGMET without TTAAii: **SIGMET** OYSN 121525Z OYSC SIGMET 1 VALID 121530/122130 OYSNSANAA FIR EMBD TS OBS/FCST OVER WESTERN AND SOUTHWESTERN MOUNTAINS AND COASTAL AREAS CB TOPS FL36 NC=	 **WSXX31** OYSN 121525Z OYSC SIGMET 1 VALID 121530/122130 OYSNSANAA FIR EMBD TS OBS/FCST OVER WESTERN AND SOUTHWESTERN MOUNTAINS AND COASTAL AREAS CB TOPS FL36 NC=
SIGMET with incorrect number format WCPH30 RPLL 210445 SIGMET **NO 01** VALID 210000/210600 RPLL TC OBS N0830 E12900 ….=	 WCPH30 RPLL 210445 SIGMET **01** VALID 210000/210600 RPLL TC OBS N0830 E12900 … =
SIGMET with incorrect formatted validity period: WSIN90 VIDP 181800 VIDP SIGMET 06 VALID **18/1600** **TO 18/2000 UTC** VIDPDELHI FIR ISOL TS … = WSSD20 OEJD 220503 OEJD SIGMET 01 VALID **220500** **TO 220900** OEJN- JEDDAH FIR ….=	 WSIN90 VIDP 181800 VIDP SIGMET 06 VALID **181600/182000** VIDPDELHI FIR ISOL TS … = WSSD20 OEJD 220503 OEJD SIGMET 01 VALID **220500/220900** OEJN-JEDDAH FIR

1.2 Quality Control Methods

OPMET Data	Elements Defining	Control Methods
METAR METAR COR SPECI (SA,SP)	• AHL • Code name • Observation date/time	Software verification Manual validate Periodic Quality Control & PI Monitoring
TAF TAF AMD TAF COR (FT)	• AHL • Code name • Originating station ICAO location indicator • Date/time of issue • Date, time of starting, time of end of the period the forecast refers to	Software verification Manual validate Periodic Quality Control & PI Monitoring
SIGMET (WS, WC, WV)	• AHL • SIGMET Sequence No • Date/time groups indicating the period of validity Additional Checks (recommended): • Name of the FIR or the CTA the message is issued for • Location indicator of the MWO originating the message	Software verification Manual validate Periodic SIGMET Quality Control Monitoring
Volcanic Ash Advisory FV	• Type of message • • Issue date and time Additional Checks (recommended): • • Location indicator or name of the VAAC centre originating the message	Software verification Manual validate Periodic VA Quality Control Monitoring
Tropical Cyclone Advisory FK	• Type of message • Issue date and time Additional Checks (recommended): • Location indicator or name of the TCAC centre originating the message	Software verification Manual validate Periodic TC Quality Control Monitoring

2 <u>OPMET Monitoring</u>

2.1 Monitoring of Scheduled OPMET data

2.1.1 Performance Indicators (PIs). The indices to be used by the RODBs are based on those developed by the European BMG for monitoring the SADIS distribution (ref. SADISOPSG/8, IP/5 – *SADIS OPMET Performance Indices*).

(i) Compliance Index

The AMBEX Compliance index can be calculated from:

$$V_{bul\ compliance} = \frac{No\ of\ reports\ received\ for\ a\ bulletin}{No\ of\ reports\ required\ for\ the\ bulletin}$$

The Compliance Index is to assess the level of compliance to the AMBEX scheme. The determination of the compliance index is performed as follows:

- Total number of reports received for AMBEX bulletin during the monitoring period, include reports in the retard bulletins.
- Weed out correction and amendment bulletins, as these are re-transmitted messages, can be disregarded.

(ii) Availability Index

The availability index measures the current coverage of the OPMET distribution against the AMBEX exchange requirements. The determination of the availability index is performed on a daily basis from the data captured during the monitoring period. If at least one non-NIL report is received from the aerodrome during the 24-hour period, that aerodrome is considered to have been available. The daily availability index of a particular bulletin can be calculated as:

$$V_{bul\ availability} = \frac{No\ of\ aerodromes\ for\ which\ one\ or\ more\ non\text{-}NIL\ data\ type\ are\ received}{No\ of\ aerodromes\ required\ in\ the\ bulletins}$$

(iii) Regularity Index

The regularity index measures the consistency in the number of reports provided by an aerodrome. The computation of Regularity Index assumes that the number of report follows a normal distribution and attempts to ascertain the distribution characteristics (mean and standard deviation) from a set of data. These characteristics are used to determine if subsequent number of reports from an aerodrome is "regular".

Denoting mean and standard deviation by μ and σ, a threshold report numbers (τ) can be established as:

$$\tau = \mu - \sigma$$

The threshold is a reporting characteristic of an aerodrome. If the subsequent daily number of

reports meets or exceeds the threshold, it is considered "regular". The daily regularity index for a bulletin can be expressed as:

$$V_{bul\ regularity} = \frac{No\ of\ aerodromes\ for\ which\ the\ number\ of\ reports\ equals\ or\ exceeds\ the\ threshold}{No\ of\ aerodromes\ required\ in\ the\ bulletin}$$

2.2 Monitoring of non-scheduled OPMET data

2.2.1 Monitoring of non-scheduled OPMET data should be executed for FK, FV, WC, WS, and WV types of bulletins.

2.2.2 The monitoring results should be presented in bulletin-oriented format, one line per bulletin indicating the abbreviated header (TTAAii CCCC YGGgg), the FIR/UIR where applicable, receipt time and originator.

2.2.3 Example non-routine OPMET monitoring result file formats:

TT	AAii	CCCC	YYGGgg	FIR/UIR Rx	Time	Origin
WS	PF21	NTAA	271004	NTTT	271004	NTAAYMYX
WS	IN90	VIDP	271000	VIDP	271007	VECCYMYX
WS	BW20	VGZR	271100	VGZR	271030	VGZRYMYX
WS	CI31	RCTP	271150	RCTP	271150	RCTPYMYX
WS	MS31	WMKK	272013	WBFC	272013	WMKKYMYX
WS	CI35	ZGGG	272225	ZGZU	272228	ZGGGYZYX
FV	AU01	ADRM	270323		270330	YMMCYMYX
FK	PQ30	RJTD	270500		270504	RJTDYMYX

Explanations to the table:

- TT: Type of bulletin FK, FV, WC, WS, WV
- AAii: Bulletin ID
- CCCC: Compiling Station
- YYGGgg: Standard time of report
- FIR/UIR: ICAO Location indicator of the FIR/UIR or blank (4 spaces) as applicable
- RxTime: Time of receipt
- Origin: Originator address.

2.2.4 Analysis of Monitoring Results:

2.2.4.1 Each RODB collects and analyses the relevant result in order to determine the effectiveness and suitability of the quality management system and to highlight any possible improvement to ICAO Regional Offices, Dakar and Pretoria.

2.3 Examples of Monitoring Results – PI Measurements

The following tables show values of Compliance, Availability and Regularity Index for ASIA/PAC OPMET bulletins compiled by Singapore RODB in March 05:

TABLE A	ROBEX Compliance Index		
	SA	FT	FC
AE31 VECC	0.81	--	
AS31 VABB	---	0.99	
AS31 VTBB	0.96	0.99	
SA32 VABB	--	0.98	
AS32 VTBB	--	0.85	
AU31 YBBN	1.00	0.99	0.97

Note: *Entry dashed out (--) means no reports of this type (SA or FT) are required*

TABLE B	Availability Index		
	SA	FT	FC
AE31 VECC	0.98	--	
AS31 VABB	---	1.00	
AS31 VTBB	0.99	1.00	
SA32 VABB	--	0.99	
AS32 VTBB	--	0.96	
AU31 YBBN	1.00	1.00	1.00
.	.	.	.
.	.	.	.

TABLE C	Regularity Index		
	SA	FT	FC
AE31 VECC	0.86	--	
AS31 VABB	---	0.96	
AS31 VTBB	0.93	0.96	
SA32 VABB	--	0.96	
AS32 VTBB	--	0.96	
AU31 YBBN	0.90	0.90	0.96
.	.	.	.

APPENDIX J

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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APPENDIX K

MTF Future Work Programme for 2009 – 2013 (*5 years: Current and next triennium*)

	Task	Source	Recent Progress Next milestone and its deadline	Final Result (completion)
1	Examine the existing and any new requirements for OPMET exchange in AFI and adjacent regions and assess the feasibility of satisfying these requirements, taking into account the availability of the data;	APIRG/16 Décision. 16/54	• The related Chapter of the AMBEX Handbook reviewed (October 2009) • Develop back up procedures for the AFI RODBs (2012)	OPMET exchange in AFI and adjacent regions, improved
2	Keep under review the AMBEX scheme and other OPMET exchange schemes and prepare proposal for updating the optimizing of the schemes;	APIRG/16 Décision. 16/54	• the AMBEX scheme reviewed by MTF/1 (October 2009) • Continuous review	Exchange of OPMET information through AMBEX, improved
3	Review and update the procedures for interregional OPMET exchange and ensure the availability of the required AFI OPMET data for the AFS satellite broadcast (SADIS);	APIRG/16 Décision. 16/54	• The related Chapter of the AMBEX Handbook developed (October 2009) • SADISOPSG/14 Concl. Reviewed (October 2009) • Continuous review of the procedures • SADISOPSG/15 Concl. Review (2010): yearly	Efficient inter-regional OPMET exchanges and availability of AFI OPMET on SADIS, improved
4	Keep under review and provide timely amendments of the regional guidance materials on the OPMET exchange; to ensure that guidance material covers procedures for the exchange of all required OPMET data types: SA, SP, FT, WS, WC, WV, FK, FV, UA;	APIRG/16 Décision. 16/54	• The related Chapter of the AMBEX Handbook developed (October 2009) • Continuous review	Regional guidance material for the issuance of OPMET established and improved
5	Conduct trials and develop procedures for monitoring and management of the OPMET exchange; to foster implementation of quality management of OPMET data by the AMBEX centres and the RODBs; and	APIRG/16 Décision. 16/54	• procedures for monitoring and management of the OPMET exchange developed (October 2009) • 2 SIGMET Test conducted (November/2009 and June 2010) • One SIGMET Test a year • One OPMET monitoring by the RODBs every three months: end of March, June, September and October • Assessment of the RODBs during yearly meeting	SIGMET exchange and management of other OPMET, enhanced
6	Prepare regional plan for the transition to XML coded OPMET information in coordination with the relevant APRIG contributing bodies.	APIRG/16 Decision. 16/54	• Final decision on future OPMET XML coded format awaited (2010) • Regional Plan to be prepared before the new binary coded OPMET (2011°	A regional OPMET format transition plan established

2. Composition

The Task Force is composed of experts from:

a) Algeria, Cameroon, Congo, Ethiopia, Egypt, Kenya, France, **Liberia**, Madagascar, Morocco, Niger, Nigeria, Senegal (Rapporteur), South Africa, UK and ASECNA.

b) Representatives of IATA and WMO and a**ny other State willing to provide Experts** are invited to participate in the work of the Task Force.
