Availability of OPMET Data in the AFI Region (21st June 2021)

PRESENTATION BY NAIROBI BULETING COMPILATION CENTER

Case study

In the AMBEX scheme AFTN circuits are used for collection of the OPMET messages by the AMBEX centres and for regional and inter-regional exchanges of OPMET bulletins. The access to the regional OPMET data banks is also provided through the AFTN

The Africa- Indian (AFI) Meteorological Bulletin Exchange (AMBEX) scheme was established by the AFI Planning and Implementation Regional Group (APIRG) in 1986. The scheme became operational in 1986 and has since then been successfully serving the ICAO AFI Region in the exchange of the required OPMET information.

AMBEX scheme was intended initially only for TAF exchanges. AIREPs, METAR, SIGMET, Volcanic Ash Advisory (VAA) and tropical Cyclone (TCA) were added to the scheme at a later stage.

The operation of the AMBEX scheme included exchange of OPMET bulletins between the originating tributary offices and the bulletin compiling centres, which, according to their functions and responsibilities, were classified as METAR Collection Centres, TAF Collection Centres and AIREP Collection Centre. The operational exchange has been carried out according to agreed transmission schedules; the bulletin contents were specified in the AMBEX Handbook.

AMBEX SCHEME Objective

The main purpose of the AFI Meteorological Bulletins Exchange (AMBEX) Scheme is to:

1. ensure the most efficient and economical exchange of operational meteorological (OPMET) information within the AFI Region as well as with the other ICAO regions to meet the requirements of users of OPMET information, and
2. ensure the implementation of the OPMET-related SARPs in Annex 3 and Annex 10, and the relevant provisions of the ICAO Air Navigation Plan (ANP) for the AFI Region in a highly efficient and standardized way.

The above objective is achieved by implementing a number of AMBEX collecting and disseminating centres (AMBEX centres), Regional OPMET data banks (RODBs), and inter-regional OPMET gateways (IROGs). All these operational units form the AMBEX scheme.

To ensure seamless global exchange of the required OPMET information, the AMBEX Scheme is developed in compliance with similar structures in the other ICAO regions, as well as with the aeronautical fixed service satellite distribution systems.

The AFI OPMET Regional Data Banks are located in Dakar, Senegal and Pretoria, while Nairobi is one of the Bulletin Compilation Centers connected to Pretoria.

OPMET bulletins via AFTN uses the following priority indicators:

- FF: SIGMET, AIREP SPECIAL, VAA, TCA and amended TAF (Annex 10 Vol II, 4.4.1.1.3)
- GG: TAF, METAR and SPECI (cf. Annex 10 Vol II, 4.4.1.1.4)

Filing times of bulletins

Recommendation. — *Meteorological bulletins required for scheduled transmissions should be filed regularly and at the prescribed scheduled times. METAR should be filed for transmission not later than 5 minutes after the actual time of observation. TAF should be filed for transmission at least one hour before the commencement of their period of validity, unless otherwise determined by regional air navigation agreement. Nairobi disseminates compiled TAFs 10 minutes before commencement to the Data bank.*

Challenges:

Collection centers that provide their data in time:

1. HBBA
2. HKNA
3. HUEN

Collection centers that compile their data marginally late

1. HKMO
2. HKKI
3. HKEL
4. HTDA
5. HTKJ
6. HTZA
7. HCMM only during the day
8. FSIA

Collection centers not received from completely:

1. HSSJ

Reasons for receiving data late or not receiving at all:

1. Wrong addressing and bulletin identifier which makes the message an error. The delay is caused by the error queues awaiting for the operator's intervention.

2. Combination of collection center bulletins into one message eg HTDA, HTKJ, HTZA, HTMW...
3. Wrong origin indicator e.g HUENZPZX
4. Wrong address. The bulletin compilation address is HKNAYPYX
5. Change of operations where most states have merged sections.
6. Lack of training on Annex 10 volume II procedures.
7. Lack of direct connectivity.
8. Lack of collaboration between states
9. Circuit or link unavailability

Performance of the states

WATCH OFFICE	ORIGIN INDICATOR	CCCC	AA	Ii	METAR (%)			TAF (%)		
					MAR	APR	MAY	MAR	APR	MAY
JKIA	HKNAYMYX	HKJK	KN	32	73	62	41	64	70	88
MOMBASA	HKMOYMYX	HKMO	KN	32	63	20	39	19	45	52
KISUMU	HKKIYMYX	HKKI	KN	32	80	91	73	62	33	70
DAR ES SALAAM	HTDAYMYX	HTDA	TN	32	14	27	19	81	66	62
KILIMANJARO	HTKJYMYX	HTKJ	TN	32	14	27	19	81	66	62
ZANZIBAR	HTZAYMYX	HTZA	TN	32	14	27	19	81	66	62
BUJUBURA	HBBAYMYX	HBBA	BI	32	38	42	41	88	91	87
ENTEBBE	HUENYMYX	HUEN	UG	32	52	37	48	96	98	92
KIGALI	HRYRYMYX	HRYR	RW	32	50	66	69	61	81	93
KAMEMBE	HRZAYMYX	HRZA	RW	32	50	66	69	61	81	93
MOGADISHU	HCMMYMYX	HCMM	SI	32	43	33	27	46	51	49
HARGESIA	HCMHYMYX	HCMH	SI	32	43	33	27	46	51	49
SEYCHELES	FSIAYMYX	FSIA	SC	32	08	22	41	12	22	50
S. SUDAN	HSSJYMYX	HSSJ	SJ	32	00%	00	00	00%	00	00

RECOMMENDATIONS

1. Training for the data entry and operational staff
2. Improved collaborations between the Collection centers and the BCC
3. Bench marking between states.
4. Peer audit by AFI states