



International Civil Aviation Organization

**SIXTEENTH MEETING OF THE
COMMUNICATIONS/NAVIGATION/SURVEILLANCE AND
METEOROLOGY SUB-GROUP (CNS/MET SG/16) OF APANPIRG**

Bangkok, Thailand, 23 – 27 July 2012

Agenda Item 12: Implementation of the issuance of OPMET (TAF, METAR, SPECI) Exchanges

- 3) other OPMET implementation issues

OPMET DATA DEFICIENCIES

(Presented by IATA)

SUMMARY

This paper presents deficiencies in OPMET data issued by states in ASIAPAC. In ICAO Annex 3 clear standards and recommended practices are described. Further for all types of OPMET data exact templates are provided and all contracting states are obliged to apply these templates accordingly

This paper relates to -

Strategic Objectives

A: Safety - *Enhance global civil aviation safety*

C: Environmental Protection and Sustainable Development of Air Transport - *Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

Global Plan Initiative:

GPI-19 Meteorological Systems

1. Introduction

1.1 The current provisions of OPMET data from ASIAPAC do not meet the airlines expectations completely. Amendment 74 of ICAO Annex 3 applicable 06Nov2008 contains some new formats and standards, which are not fully applied by states.

1.2 Contracting states are obliged to apply the Standards and Recommended Practices.

1.3 A continuous IATA monitoring of the OPMET exchange showed some deficiencies in the application of the Standards and Recommended Practices described in ICAO Annex 3.

1.4 A similar working paper was presented during CNS/MET SG/13. The monitoring showed that no progress could be achieved for this topic and therefore the same problems are described again.

Agenda Item 12 (3)

23/07/12

2. Discussion**Deficiencies of TAF**

2.1 ICAO Annex 3 contains a TAF template describing how a TAF should be provided.

2.2 The following table list all airports with rejected TAFs received during 7 days.

AYGR	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
AYTA	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
NCRG	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
OAIX	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
OPRN	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
RKPK	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
VABB	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
VANP	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
VECC	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
VEPT	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
VGEG	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
VIJP	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
VILK	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
VOCL	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
VOHS	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
WBKW	FT	REJECTED (BECMG/TEMPO/INTER/FM missing)
VTSS	FT	REJECTED (Can not create fromdate - new format)
WMKL	FT	REJECTED (Can not create fromdate - new format)
WAMH	FT	REJECTED (FT TAF promulgation time more than 6 hours in the future)
WIII	FT	REJECTED (FT TAF promulgation time more than 6 hours in the future)
OPGD	FT	REJECTED (Gust lower then wind)
VOTV	FT	REJECTED (Gust lower then wind)
VTCC	FT	REJECTED (Gust lower then wind)
VTCT	FT	REJECTED (Gust lower then wind)
OPNH	FT	REJECTED (MAIN, BECMG or FM period without valid time token given)
RKNY	FT	REJECTED (MAIN, BECMG or FM period without valid time token given)
RKSS	FT	REJECTED (MAIN, BECMG or FM period without valid time token given)
VEGT	FT	REJECTED (MAIN, BECMG or FM period without valid time token given)
VNKT	FT	REJECTED (MAIN, BECMG or FM period without valid time token given)
RKJY	FC	REJECTED (Message validity period longer than 30 hours)
RKTN	FT	REJECTED (Message validity period longer than 30 hours)
YPAD	FT	REJECTED (Message validity period longer than 30 hours)
AYPY	FT	REJECTED (Old (HHHH) and new (DDHH/DDHH) time formats used in one TAF message)
OPPS	FT	REJECTED (Old (HHHH) and new (DDHH/DDHH) time formats used in one TAF message)
ROTM	FT	REJECTED (Old (HHHH) and new (DDHH/DDHH) time formats used in one TAF message)

ZWSH FT REJECTED (Old (HHHH) and new (DDHH/DDHH) time formats used in one TAF message)

AGGH FT REJECTED (Period outside global validity dates)

AYVN FT REJECTED (Period outside global validity dates)

NFNA FT REJECTED (Period outside global validity dates)

NGFU FT REJECTED (Period outside global validity dates)

NVVW FT REJECTED (Period outside global validity dates)

OASA FT REJECTED (Period outside global validity dates)

OAUZ FT REJECTED (Period outside global validity dates)

OPSK FT REJECTED (Period outside global validity dates)

OPST FT REJECTED (Period outside global validity dates)

PGUA FT REJECTED (Period outside global validity dates)

RJOI FT REJECTED (Period outside global validity dates)

RJTY FT REJECTED (Period outside global validity dates)

RKJK FT REJECTED (Period outside global validity dates)

RPLB FT REJECTED (Period outside global validity dates)

RPLI FT REJECTED (Period outside global validity dates)

VAAH FT REJECTED (Period outside global validity dates)

VGHS FT REJECTED (Period outside global validity dates)

VIAR FT REJECTED (Period outside global validity dates)

VIBN FT REJECTED (Period outside global validity dates)

VOMM FT REJECTED (Period outside global validity dates)

VTBS FT REJECTED (Period outside global validity dates)

VTBU FT REJECTED (Period outside global validity dates)

VTSB FT REJECTED (Period outside global validity dates)

VTSC FT REJECTED (Period outside global validity dates)

VTSE FT REJECTED (Period outside global validity dates)

VTSF FT REJECTED (Period outside global validity dates)

VTSG FT REJECTED (Period outside global validity dates)

VTSP FT REJECTED (Period outside global validity dates)

VTSR FT REJECTED (Period outside global validity dates)

VTST FT REJECTED (Period outside global validity dates)

VTUD FT REJECTED (Period outside global validity dates)

VTUU FT REJECTED (Period outside global validity dates)

VYYY FT REJECTED (Period outside global validity dates)

WADL FT REJECTED (Period outside global validity dates)

WAMG FT REJECTED (Period outside global validity dates)

WAMM FT REJECTED (Period outside global validity dates)

WAMT FT REJECTED (Period outside global validity dates)

WATT FT REJECTED (Period outside global validity dates)

WIHH FC REJECTED (Period outside global validity dates)

WIPP FT REJECTED (Period outside global validity dates)

WMKB FT REJECTED (Period outside global validity dates)

ZYCC FT REJECTED (Period outside global validity dates)

NFFN FT REJECTED (Validity starts more that 12 hours in the future)

NIUE FT REJECTED (Validity starts more that 12 hours in the future)

AYCH FT REJECTED (Wind, visibility or clouds are not given for global period)

AYGA FT REJECTED (Wind, visibility or clouds are not given for global period)

AYMH FT REJECTED (Wind, visibility or clouds are not given for global period)

Agenda Item 12 (3)

23/07/12

AYWD FT REJECTED (Wind, visibility or clouds are not given for global period)
 NZHN FT REJECTED (Wind, visibility or clouds are not given for global period)
 OPRK FT REJECTED (Wind, visibility or clouds are not given for global period)
 VEBS FT REJECTED (Wind, visibility or clouds are not given for global period)
 WARJ FT REJECTED (Wind, visibility or clouds are not given for global period)
 WMKM FT REJECTED (Wind, visibility or clouds are not given for global period)
 YBNA FT REJECTED (Wind, visibility or clouds are not given for global period)
 YBTH FT REJECTED (Wind, visibility or clouds are not given for global period)
 YCDU FT REJECTED (Wind, visibility or clouds are not given for global period)
 YGTE FT REJECTED (Wind, visibility or clouds are not given for global period)
 YKRY FT REJECTED (Wind, visibility or clouds are not given for global period)
 YLEC FT REJECTED (Wind, visibility or clouds are not given for global period)
 YLIS FT REJECTED (Wind, visibility or clouds are not given for global period)
 YLTV FT REJECTED (Wind, visibility or clouds are not given for global period)
 YMAV FT REJECTED (Wind, visibility or clouds are not given for global period)
 YMDG FT REJECTED (Wind, visibility or clouds are not given for global period)
 YMGD FT REJECTED (Wind, visibility or clouds are not given for global period)
 YMHU FT REJECTED (Wind, visibility or clouds are not given for global period)
 YMMB FT REJECTED (Wind, visibility or clouds are not given for global period)
 YMPC FT REJECTED (Wind, visibility or clouds are not given for global period)
 YMTG FT REJECTED (Wind, visibility or clouds are not given for global period)
 YNGU FT REJECTED (Wind, visibility or clouds are not given for global period)
 YOOM FT REJECTED (Wind, visibility or clouds are not given for global period)
 YPDN FT REJECTED (Wind, visibility or clouds are not given for global period)
 YPJT FT REJECTED (Wind, visibility or clouds are not given for global period)
 YSCN FT REJECTED (Wind, visibility or clouds are not given for global period)
 YSRI FT REJECTED (Wind, visibility or clouds are not given for global period)
 YSWG FT REJECTED (Wind, visibility or clouds are not given for global period)
 YTGM FT REJECTED (Wind, visibility or clouds are not given for global period)
 YTWB FT REJECTED (Wind, visibility or clouds are not given for global period)

NVVV FT REJECTED (Wrong validity tokens - cannot be auto-corrected)
 PAED FT REJECTED (Wrong validity tokens - cannot be auto-corrected)
 VLLB FT REJECTED (Wrong validity tokens - cannot be auto-corrected)
 VLLN FT REJECTED (Wrong validity tokens - cannot be auto-corrected)
 VLPS FT REJECTED (Wrong validity tokens - cannot be auto-corrected)
 VLSK FT REJECTED (Wrong validity tokens - cannot be auto-corrected)
 VLVT FT REJECTED (Wrong validity tokens - cannot be auto-corrected)
 YTEM FC REJECTED (Wrong validity tokens - cannot be auto-corrected)

2.4 The above list does not give an indication how often such error occur and it also does not mean that only these aerodromes are issuing incorrect formatted TAF. Below one or two example of each reject reason.

REJECTED (BECMG/TEMPO/INTER/FM missing)

This error is caused by misspellings or incorrect period information.

TAF VABB 050900Z 0512/0618 26010G20KT 4000 HZ/RA SCT015 SCT020
 SCT025TCU BKN100
 BECMG 0513/0515 26008KT
 TEMPO 0512/0515 1500 TSRA/SHRA BKN008 FEW030CB OVC080
 BECMG 0521/0523 09006KT

TEMPO 0600/0603 1500 TSRA/SHRA BKN008 FEW030CB OVC080
BECMG 0604/0606 26010G20KT 4000 HZ/RA
BEWCMG 0613/0615 26008KT
TEMPO 0612/0615 1500 TSRA BKN008 FEW030CB OVC080=

TAF VOCL 102100Z 1100/1206 32005KT 6000 FEW015 BKN090
TEMPO **100**/1103 2000 SHRA/RA FEW006 SCT012 FEW025CB OVC080
BECMG 1104/1105 33010KT 6000
TEMPO 1112/1115 3000 TSRA/SHRA FEW008 SCT012 FEW025CB OVC080
BECMG **111**/1117 27005KT 5000 HZ
TEMPO 1200/1203 3000 SHRA/RA FEW006 SCT012 FEW025CB OVC080 BECMG
1204/1205 30010KT 6000 HZ=

REJECTED (Can not create fromdate - new format)

This error is caused by erroneous time periods in BECMG or TEMPO

TAF VTSS 042300Z 0500/0524 20008KT 9999 SCT020 BKN300
TEMPO 0506/0512 23010KT 6000 SHRAFEW018CB BKN020 OVC110
BECMG 0513/**01515** 00000KT 8000 FEW020 BKN300=

REJECTED (FT TAF promulgation time more than 6 hours in the future)

This error is caused by a wrong date in the promulgation time.

TAF WIII **19**0500Z **11**06/1218 04010KT 9999 FEW020
BECMG 1112/1114 15005KT 8000 NSC
BECMG 1118/1122 00000KT 2000 FBR NSC
BECMG EW018
BECMG 1200/1202 15008KT 9999 FEW020=

REJECTED (Gust lower than wind)

Such errors are mostly caused by typing error.

TAF VOTV 072100Z 0800/0906 00000KT 4000 HZ SCT015 FEW025CB BKN100
TEMPO 0800/0803 2000 RA/DZ SCT010 FEW025CB OVC100
BECMG 0805/0806 30010KT 6000
TEMPO 0810/0815 **320100G20KT** 3000 TSRA/RA SCT010 FEW025CB OVC080
BECMG 0816/0817 30005KT 4000 -RA/DZ
TEMPO 0900/0904 27010KT 2000 SHRA/RA SCT008 SCT012 FEW025CB
OVC080=

REJECTED (MAIN, BECMG or FM period without valid time token given)

This is mostly caused by typing errors.

TAF VEGT 110300Z 1106/1115 05005KT 5000 HZ BEC 1108/10 6000
BEC 1110/11 00000KT 5000 HZ
BEC 1111/13 4000 HZ BEC 1114/15 3000 HZ
TEMPO **1106/15** 23020KT 1500 -TSRA FEW010 BKN015 FEW025CB OVC090=

TAF OPNH 060930Z 0612/0718 13007KT 4000 HZ SCT030 SCT100
TEMPO 0700/0704 VRB03KT 3000 FU SCT030 WCT100
BECMG **07060708** 21005G15KT 5000 HZ FEW030 SCT100=

Agenda Item 12 (3)

23/07/12

REJECTED (Message validity period longer than 30 hours)

Maximum validity time is 30 hours.

TAF AMD YPAD 102247Z **1023/1206** 01010KT 9999 BKN014
FM110100 01010KT CAVOKFM110900 02012KT 9999 -SHRA BKN100
FM120000 34010KT 9999 -SHRA SCT040 BKN080
RMK=

REJECTED (Old (HHHH) and new (DDHH/DDHH) time formats used in one TAF message)

TAF ZWSH 042123Z 0500/0524 06005MPS CAVOK
BECMG 0505/0506 12005MPS
BECMG 0511/0512 20005MPS
BEMCG 1718 30005MPS=

REJECTED (Period outside global validity dates)

This error is caused by incorrect date/time information.

TAF NFNA 070412Z 0706/**0806** VRB03KT 9999 SCT020
BECMG 0715/0717 12010KT
BECMG 0805/**0807** VRB03KT=TAF VOMM 071500Z 0718/**0824** 18010KT 6000 SCT020 SCT100
BECMG 0803/0804 27010KT BECMG 0809/0810 09010KT
TEMPO 0809/0818 SCT020 FEW025CB BKN100
BECMG 0818/**1819** 16010KT=

REJECTED (Validity starts more that 12 hours in the future)

TAF NFFN **110405Z 1200**/1224 13015KT 9999 SCT030=

REJECTED (Wind, visibility or clouds are not given for global period)

This error is caused by a wrong application of the TAF template in ICAO Annex. According ICAO Annex 3, Appendix 3 Surface Wind, Visibility and Clouds are mandatory parameters. Weather is an optional parameter.

TAF YMAV 061559Z 0618/0718 01006KT 8000 HZ
BECMG 0623/0701 03010KT CAVOK
BECMG 0707/0709 35006KT CAVOK
PROB30 0618/0623 0500 FG
RMK=

REJECTED (Wrong validity tokens - cannot be auto-corrected)

This error is caused by incorrect validity information. The commencement of the period of validity is in the past.

TAF VLVT **072300Z 0712/0806** 09004KT 3000 RA SCT010 BKN040 BKN090=

Deficiencies of SIGMET

3.3 ICAO Annex 3 contains a TAF template describing how a SIGMET should be provided.

2.6 The following table list all airports with rejected SIGMETs received during 7 days

VABF	REJECTED (Can't determine FIR/UIR data from message body)
VECF	REJECTED (Can't determine FIR/UIR data from message body)
VIDF	REJECTED (Can't determine FIR/UIR data from message body)
VVNB	REJECTED (Can't determine FIR/UIR data from message body)
VYYY	REJECTED (Can't determine FIR/UIR data from message body)
WAAZ	REJECTED (Can't determine FIR/UIR data from message body)
WIIZ	REJECTED (Can't determine FIR/UIR data from message body)
ZMUB	REJECTED (Can't determine FIR/UIR data from message body)

2.8 The above list does not give an indication how often such error occur and it also does not mean that only these UIR/FIR are issuing incorrect formatted SIGMET or use unknown FIR/UIR codes. Below one or two example of each reject reason.

REJECTED (Can't determine FIR/UIR data from message body)

Incorrect format:

No '-' at the end of first line and '-' between location indicator and name of UIR/FIR.

VIDF SIGMET 01 VALID 101100/101500 VIDP
VIDF-DELHI FIR FRQ TS OBS AT 1000Z WI N2501 E07211 N2508 E8245 N2727 E7636
TOP F/L 350 MOV NW 05KT NC=

Double '-' at the end of first line and '-' between location indicator and name of UIR/FIR.

VECF SIGMET 01 VALID 100100/100500 VECC-
VECF-KOLKATA FIR EMBD CB FCST AT 100100Z N OF N18 AND E OF E86 TOP FL300
NC=

No '-' at the end of first line.

VABF SIGMET 01 VALID 091000/091400 UTC VABB
VABF MUMBAI FIR EMBD TS OBSD AT 090830Z S OF N1230 E OF 06730 N OF 0600
AND S OF N0300 E OF 06500 N OF S0200 TOP FL 390 MOV W NC=

ZMUB SIGMET01 VALID 100600/101200
ZMUB FIR MOD TURB OBS AND FCST TOP FL380 IN AREA BOUNDED BY N4640 E11317
- N4447 E11315 - N4443 E10918 - N4312 E11053 - N4408 E10648 - N4301 E10650 - N4353
E10425 - N4202E10249 MOV E 40KMH INTSF=

Unknown FIR/UIR:

VYYY SIGMET 1 VALID 090830/091230 VYYY-
VYYY YANGON FIR EMBD TS FCST S OF N2000 E OF E09200 TOP300 MOV NE 08KT
NC=

WAAZ SIGMET A01 VALID 090155/090755 WAAA
WAAZ UJUNG PANDANG FIR VA ERUPTION MT BATU TARA S0747 E12335

Agenda Item 12 (3)

23/07/12

VA CLD OBS AT 0130Z

SFC/FL060 S0750 E12335 - S0810 E12245 - S0735 E12240 - S0750 E12335 MOV W 15KT
FCST 0730Z SFC/FL060 S0750 E12335 - S0810 E12245 - S0735 E12240 S0750 E12335=

WIIZ SIGMET 01 VALID 080100/080500 WIII-^M

WIIZ JAKARTA FIR AREA OF ISOL EMBD CB/TS OBS BOUNDED BY EQ E10212-S0630
E10022 S0650 E10120 NC=

3. Conclusion

3.1 Since the introduction of Amendment 74 of ICAO Annex 3 in November 2008 the number of incorrect OPMET data messages has increased. In order to enable automated system to process all OPMET data, the incorrect message must be corrected manually or the user system must be upgraded in order to perform automated corrections. Both action are very costly and could be avoided if all states would make quality control and a verification of all outgoing OPMET data.

3.2 A similar working paper was presented during CNSMET SG/13. The monitoring showed that no progress could be achieved for this topic.

3.3 The group may wish to formulate the following conclusion:

Draft Conclusion 16/... — Improvement of OPMET data format

That, ICAO reminds all States

- a) to apply the Standards and Recommended Practices in Annex 3 more precise;
- b) to consider, as a matter of urgency, the possibility to establish a quality control, format and consistency verification procedures for OPMET data;
- c) to undertake all efforts to reduce the errors in OPMET data significantly, the aim should be that less than 5% of all issued OPMET are incorrect; and
- d) to achieve improvements and report back to the CNS/MET SG/17.

4. Action by the meeting

4.1 The group is invited

- a) to note the content of this working paper; and
- b) to decide on the draft conclusion proposed for the group's consideration
