



International Civil Aviation Organization

**NINTH MEETING OF THE
COMMUNICATIONS/NAVIGATION/SURVEILLANCE AND
METEOROLOGY SUB-GROUP OF APANPIRG
(CNS/MET SG/9)**

Bangkok, Thailand, 11–15 July 2005

Agenda Item 9: Exchange of OPMET Information

Agenda Item 12: MET support for operations at aerodromes and terminal areas

**ISSUES ARISING FROM THE CHANGING DEMANDS ON
THE PRODUCTION AND DISSEMINATION OF
AERODROME FORECASTS**

(Presented by New Zealand)

SUMMARY

This paper looks at some of the issues arising from recent additional TAF validity proposals and the distribution methods of meteorological information.

1. INTRODUCTION

1.1 The requirements for meteorological forecast information for aerodromes and the preferred means of dissemination of this information is changing as the international aviation industry changes through changes in route and passenger demand, and the implementation of new long range aircraft technologies.

1.2 These developments are bringing significant changes to the facilitation of international air navigation. States need to ensure that they continue to meet their existing Annex 3 meteorological information and dissemination requirements while, at the same time, they carefully assess, agree as may be appropriate, and introduce new or revised meteorological information requirements.

1.3 It is particularly important that effort is made to fully assess the flow-on or interactive effects of such change initiatives as well as the more immediate effects of the changes.

1.4 This paper looks at a few of the issues arising from recent “long” TAF (T+30 hr) validity proposals, implementation in some States of “short” TAFs (T+9 and T+12 hr), and the current distribution methods of meteorological information.

2. BACKGROUND

Aerodrome Forecasts

2.1 In the report of the OPMET/M TF/2 Meeting to the CNS/MET/SG8 Meeting, user demand expressed by IATA and the previous CNS/MET/SG meeting for the inclusion of short TAFs in the regular ROBEX exchange for the region was noted. The report also noted that a number of countries were already producing short TAFs.

2.2 This demand has also been observed in the ASIA region by New Zealand over recent times. It would appear that the Low Cost Carrier (LCC) airlines operating over short routes of 3 to 5 hours have required these short TAFs.

2.3 APANPIRG/14 endorsed the short TAF proposal and requested information from States on their current practice in this regard. There was general agreement that the short TAFs should be included in the ROBEX exchange. New Zealand submitted that it currently produced a T+9 hr TAF for its designated international aerodromes only for the purpose of fulfilling its VOLMET broadcast obligations but had no other plans for the provision of short TAFs in pre-flight documentation.

2.4 It was agreed by the CNS/MET/SG8 Meeting that the available T+9 and T+12 hr short TAFs from the ASIA/PAC States currently producing them should be included in the ROBEX exchange, although no conclusion was set out in this regard (see section 9.6 of the meeting Report).

2.5 The ROBEX Handbook (12th Ed 2004) details the guidance material for the exchange of OPMET data in the MID/ASIA and ASIA/PAC Regions. Currently there is no requirement for the inclusion of short T+9 or T+12 hr TAFs in the ROBEX exchange.

2.6 The Report of CNS/MET/SG 8 refers (see section 9.24) to discussion regarding the user needs for extended TAF. This discussion include the following observations:

- (a) Demand existed for extended TAF validity (long TAFs, T+30 hr) to cover increasingly long flights such as SIN-JFK.
- (b) There was concern regarding the desired and achievable accuracy of the T+30 hr forecast in comparison with the current 18 and 24-hour forecasts.
- (c) IATA reported that for flight planning purposes, 18-hour, 24-hour or 30-hour TAFs were sufficient as long as the lead-time for TAF issuance was not longer than one hour within a 6 hour review procedure.
- (d) In such circumstances, IATA stated that there would be no operational need for a short T+9 hr TAF.
- (e) Discontinuation of the short T+9 hr TAFs was anomalous to the ASIA/PAC Region because they were not required by the regional ANP (refer 2.2 above).
- (f) There was concern from a number of States that long TAF developments were a significant change to the current provisions of Annex 3.

2.7 From the Report of CNS/MET SG 8, the following conclusion was set out:

8/31 Feasibility of extending the validity of TAF to 30 hours

That, ICAO be invited to study in coordination with WMO the feasibility of the introduction of a new TAF with a period of validity of 30 hours in view of the emerging new requirements for very long haul flights.

2.8 At the meeting, the delegates from the United States and Singapore undertook to conduct trials on the issuance of T+30 hr TAF. It was agreed that such trials would be evaluated on the basis of bi-lateral agreement between the two States in consultation with IATA regarding the operational requirements.

OPMET Availability

2.9 The Chicago Convention, through Annex 3, requires signatory States to provide requisite meteorological information for its designated international aerodromes (Annex x) to be provided in support of international air navigation.

2.10 Historically, international carriers were obliged, for technical and regulatory reasons, to confine their operations to designated international aerodromes. However, modern technologies and deregulated environments have allowed international carriers to operate into secondary aerodromes not formally designated by State for the purpose under the Chicago Convention.

2.11 With the prescription of the provision of OPMET data restricted to designated international aerodromes by many States, OPMET meteorological information for such secondary aerodromes used by international carriers (many of which are LCCs) is not available through ROBEX and other database systems supported by ICAO.

2.12 This is case the in New Zealand for example, where OPMET information for Auckland, Wellington and Christchurch is provided through ROBEX. However, there are a number of secondary aerodromes used by international carriers in New Zealand where the requisite meteorological information can only be accessed through commercial arrangements with the New Zealand meteorological services supplier, MetService.

3. DISCUSSION

3.1 There are 3 sets of issues embedded in the background above. These can be summarised as follows:

1. The inherent difficulties and expectations generated in providing long TAFs.
2. The need for the implementation of short TAFs clearly agreed and implementation strategy defined.
3. The need to review or reiterate the current OPMET requirements for inclusion of aerodrome meteorological information.

Long TAFS and other expectations

3.2 The work that the United States and Singapore are doing in the development and evaluation of long TAFs is encouraged, as is the work in the area being undertaken by the WMO. However, while a robust long TAF protocol may be developed, its very generation will bring further expectations from users. This may be more apparent in ASIA/PAC considering the volume of long operations to the region.

3.3 Nevertheless support for long TAF development may need to be tempered because it is unclear whether the need extends beyond that currently identified for flights between Asia and the United States. For example it may be the case that long TAFs are only required for a small number of selected international aerodrome pairs.

3.4 Planning for long flights may also require a “long” significant weather chart (SIGWX). The capabilities of the WAFCs in this regard have been of some discussion. There may be a need for the WAFCs and WMO to address the latent demand for the long SIGWX and develop suitable forecasting protocols.

3.5 Notwithstanding issues regarding the extension of normal meteorological criteria for long SIGWX purposes, there may be other ancillary but significant issues regarding the treatment of special phenomena in long SIGWX such as volcanic ash and radioactive material.

Short TAFs and their prescription

3.6 In the Background above (section 2), there seems to be a conflict of requirements that needs to be reconciled. On one hand there is currently a need for short TAFs but on the other, IATA believes that the need could be covered by issuing standard T+18 and T+24 hr TAFs and the proposed long T+30 hr TAFs with review and amendments made on a 6 hourly basis.

3.7 Perhaps a strategy needs to be developed for the short TAFs to be prescribed in the SARPs as an interim measure until the long TAFs and an increased frequency of TAF review and issue is implemented.

OPMET – Inclusion of secondary/domestic aerodromes

3.8 The question of the inclusion of secondary aerodromes in OPMET when such aerodromes are being used for international flights is probably a question that will be approached differently by each State.

3.9 State Meteorological Authorities that are responsible for meeting Annex 3 requirements in many cases are the civil aviation regulator for the State. This is the case in New Zealand. The view of these authorities is generally that the safety risk of domestic and international air navigation, insofar as meteorological information is concerned, should be mitigated in an expeditious manner. For domestic aviation, or aspects of international aviation outside the gambit of Annex 3 and associated systems such as OPMET and ROBEX, this mitigation can be implemented in many ways.

3.10 In New Zealand, meteorological information for secondary aerodromes is available from the meteorological service supplier, MetService. However, the supply relationship is commercial and there is no free access domestic equivalent of ROBEX for airlines to retrieve pre-flight meteorological information for such aerodromes.

3.11 The New Zealand CAA, as the Meteorological Authority, is currently satisfied that international operations into and out of domestic aerodromes do have access to the requisite meteorological information. The CAA is also mindful that any requirement to include these domestic aerodromes in OPMET will have significant funding implications.

3.12 The situation in New Zealand may be commercially unique; however, the implications of the provision of OPMET meteorological information on secondary aerodromes would inevitably have significant logistical or financial impacts for other States.

3.13 Given the changing face of international aviation and the increased use of domestic aerodromes discussion needs to be entered into as to how best solve the issues of what information should be disseminated as OPMET.

4. ACTION BY THE MEETING

4.1 The meeting is invited to

(a) Note the content, and

(b) Exchange views on the various matters discussed in this paper.
