



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

1) review report of OPMET/M TF/3 meeting

**PLANNING FOR THE TRANSITION TO BUFR-CODED OPMET
INFORMATION**

(Presented by Secretariat)

SUMMARY

This paper presents a summary of the discussions by the third meeting of the OPMET Management Task Force of the CNS/MET Sub-group of APANPIRG, held in March 2005, on the subject. It contains a proposal for a conjoint meeting of the OPMET/M TF and the ATN Transition Task Forces in early 2006.

1. INTRODUCTION

1.1 This paper discusses the transition from the traditional alphanumeric codes (TAC) used for coding/decoding of the OPMET information, such as METAR/SPECI and TAF, to the so-called table-driven code formats (TDCF). It has been identified that the TDCF suitable for the OPMET information would be the Binary Universal Form for the Representation of meteorological data (BUFR). Therefore, the expression *BUFR Transition* would be used hereafter.

1.2 The meeting may wish to recall that the BUFR transition for OPMET data stems from a recommendation by the MET Divisional Meeting (2002) and from the plan of the World Meteorological Organization (WMO), endorsed by its 14th Congress in May 2003, for the transition from TAC to TDCF for all types of meteorological information including the OPMET data. It should be noted in this regard, that according to the *Working Arrangements between ICAO and WMO* (Doc 7475), matters related to meteorological codes are prerogative of the WMO, thus ICAO is obliged to follow the WMO plan for replacement of the alphanumeric codes with digital ones.

1.3 It is also recalled that the 15th meeting of APANPIRG, 23 – 27 August 2004, Bangkok, discussed the need for regional planning of the BUFR transition. The meeting adopted the following Decision:

Decision 15/40 – Planning for migration to BUFR-coded aeronautical meteorological messages

That,

- a) the ATN Transition Task Force and the OPMET Management Task Force be tasked to address the issues related to the transition to BUFR-coded aeronautical meteorological messages by conducting studies, as necessary;*
- b) the two Task Forces develop in coordination a regional plan for migration to BUFR-coded aeronautical meteorological information by the end of 2005.*

1.4 APANPIRG advised that, in order to foster the coordination between the groups, one of the next regular meetings of the ATN Transition TF and the OPMET/M TF should be held jointly.

2. DISCUSSION

OPMET/M TF/3 meeting

2.1 The third meeting of OPMET/M TF, held from 2 to 4 March 2005 in Bangkok, reviewed the current status of the BUFR transition planning. It was recognized that there were global and regional aspects of the transition. The global framework and guidance should be provided by the ICAO HQs and the ACP; the regional aspects, including a number of technical issues should be addressed by the specialized contributory bodies of APANPIRG, such as OPMET/M TF and ATN Transition TF.

2.2 OPMET/M TF reviewed the report of the EUR BUFR Transition Assessment TF prepared in late 2004. The report addressed the whole complex of issues and served as a very useful material for the further planning of the transition.

2.3 The group agreed that the findings and conclusions of the EUR BUFR Transition Assessment TF were to a great extent valid also for the ASIA/PAC region. It was recognized that there were a number of operational and technical issues to be addressed, such as:

- The implementation of communication infrastructure capable of handling digital data;
- Development and implementation of TAC/BUFR and BUFR/TAC conversion software;
- Preparation/adaptation of national and regional OPMET exchange schemes/facilities to handle digital data, including a transition period of dual exchange (TAC and BUFR simultaneously).

2.4 In view of the complexity of the issues, it was evident that the work on the regional migration plan could not be completed by the end of 2005, as initially envisaged by APANPIRG (Decision 15/40 refers). In order to progress with the planning and to ensure the necessary COM expertise, OPMET/M TF/3 meeting

proposed that the next meeting of the Task Force, scheduled for February/March 2006 (exact dates to be decided), should be held conjointly with the ATN Transition Task Force.

ICAO Aerodrome Meteorological Observing Systems Study Group (AMOSSG)

2.5 The ICAO Aerodrome Meteorological Observing Systems Study Group (AMOSSG), which had a meeting from 11-14 April 2005 in Montreal, reviewed the progress with respect to the migration to BUFR coded OPMET messages.

2.6 Through the EANPG, ICAO has been requested to provide guidance to achieve a uniform global approach to the implementation of binary universal form for the representation of meteorological data (BUFR) coded OPMET messages, including early advice on the likely time-frame for ATSMHS extended services to accommodate BUFR coded messages. The time frame for this transition is from 2007 to 2015.

2.7 The ACP will be invited by the AMOSSG to develop a global plan for the introduction of BUFR coded OPMET messages.

2.8 An outline, proposed by the secretariat, is as follows:

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| 2007: | Provision to allow BUFR coded messages between States under bilateral agreements |
| 2010: | Provision (as recommended practice) for the exchange of OPMET data in BUFR code between the international OPMET databanks in Brasilia, Brussels, Dakar, Pretoria, Vienna and Washington and regional OPMET data banks in Bangkok, Brisbane, Nadi, Singapore and Tokyo as well as SADIS and ISCS uplink sites. |
| 2013: | Provisions as indicated for 2010 become Standard; recommended practice for all States to issue OPMET data in BUFR to the appropriate OPMET data bank |
| 2016: | Provisions as indicated for 2013 become Standard. |

2.9 Although it would be the primary goal to transport these messages over the ATN, consideration can be given to use the public internet as transport medium.

ATN Transition Task Force

2.10 The seventh meeting of the ATN Transition Task Force of APANPIRG was held from 18 to 22 April 2005 in Shanghai, China. The meeting recalled APANPIRG Decision 15/40, *Planning for migration to BUFR-coded aeronautical meteorological messages*, that tasked the ATN transition Task Force and the OPMET Management Task Force (OPMET/M TF) to address the issues related to the transition to BUFR-coded aeronautical meteorological information.

2.11 The meeting was informed that the 3rd meeting of OPMET/M TF reviewed in detail the current situation with the transition to BUFR code and concluded that, due to the complexity of the issue, the development of the regional transition plan would require more time than initially envisaged by APANPIRG. In order to address the transition issues from both COM and MET perspective, OPMET/M TF/3 meeting proposed that a joint meeting of the OPMET/M TF and ATN Transition Task Force should be held in March 2006.

2.12 In the ensuing discussion, Japan clarified that the current operational AMHS service was a basic AMHS, which processes AFTN messages. It may not be able to support those extended service. To support BUFR code, necessary study is required. The USA confirmed that the AMHS commissioned might be able to support the emerging requirement if necessary software changes are made. In order to provide a better understanding of the requirements for transition to BUFR code, which was a precondition for the effective regional planning of the transition, the meeting formulated the following Decision:

Decision 7/15 - Study for transition to BUFR Code

That, the ATNTTF Working Group study the capability of AMHS being introduced in the region and detailed requirement for the BUFR code. The result of study to be presented to the next OPMET/M Task Force meeting to be held early 2006.

2.14 The Chairman of the Task Force would coordinate and discuss with the Chairman of OPMET/M TF the next step to be taken for preparing the joint meeting in 2006.

3. ACTION BY THE MEETING

3.1 The CNS/MET Sub-group is invited to:

- a) note the information about the progress in the regional planning for BUFR transition provided in this paper; and
- b) advise OPMET/M TF and the ATN Transition TF on the future work necessary to address the issues related to the transition to BUFR-coded OPMET information.
