



International Civil Aviation Organization

**THIRTEENTH MEETING OF THE ASIA/PACIFIC REGIONAL OPMET
BULLETIN EXCHANGE WORKING GROUP (ROBEX WG/13)**

Seoul, Republic of Korea, 16 – 18 March 2015

Agenda Item 4: OPMET exchange

CAPACITY BUILDING FOR IMPLEMENTATION OF DIGITAL OPMET

(Presented by the Secretariat)

SUMMARY

This paper presents a proposal for a capacity building initiative to support implementation of digital OPMET in the Asia/Pacific.

1. INTRODUCTION

1.1 The availability of meteorological information in a globally interoperable digital format is seen as a key enabler for future global air traffic management within a system-wide information management (SWIM) environment. Amendment 76 to Annex 3 (applicable November 2013) enabled the exchange of OPMET data (METAR/SPECI, TAF and SIGMET) in digital form under bilateral agreements between States in a position to do so (Annex 3, Appendix 3, 2.1.3-2.1.4; Appendix 5, 1.1.2-1.1.4; Appendix 6, 1.1.6-1.1.8; and *Manual on the Digital Exchange of Aeronautical Meteorological Information* (Doc 10003) refer).

1.2 While the initial enabling clauses placed no immediate requirements on States to implement digital exchange of meteorological information, Amendment 76, plus the introduction of Doc 10003, did represent the first step towards the transition of all required aeronautical meteorological information to a digital form and its integration into a SWIM environment. Future amendments are therefore envisaged to enhance and expand the digital exchange provisions in Annex 3 thereby escalating the requirement for States to implement digital exchange of meteorological information. This paper proposes a way forward to build capacity in the Asia/Pacific to support planning and implementation of digital OPMET exchange.

2. DISCUSSION

2.1 The meeting is reminded that, if approved as part of Amendment 77 to Annex 3, the exchange of METAR/SPECI, TAF and SIGMET in digital form will be elevated to a Recommended Practice, applicable November 2016, allowing for the dissemination of meteorological information in digital form by all States – not just those presently in a position to do so. Furthermore, the Air Navigation Commission authorized the Meteorology Divisional Meeting's July 2014 recommendation for the inclusion in the proposed Amendment 77 of provisions enabling the digital exchange of other

meteorological information such as volcanic ash and tropical cyclone advisory information and AIRMET information.

2.2 The meeting is also reminded that the provisions for digital exchange of meteorological information are envisaged to be elevated further as part of Amendment 78 to Annex 3 (applicability 2018 or 2019) whereby the exchange of METAR/SPECI, TAF and SIGMET in digital form would become an ICAO Standard.

2.3 In view of the progression of ICAO provisions for the digital exchange of meteorological information outlined above, the meeting will recall that ROBEX WG/12, in action agreed 12/2 – *Facilitating the implementation of digital exchange in the APAC Region*, tasked the Secretariat and members with reporting on the activities, plans and identified implementation issues in order to facilitate Regional planning and implementation of OPMET exchange in a digital form.

2.4 Reports on States' activities, plans and specific issues concerning implementation of digital exchange of OPMET are provided in IP/4 (presented by ROK) and WP/12 (presented by Australia). Furthermore, the meeting will recall that the MET SG/18 meeting (August 2014) had also considered States' reports in IP/22 (presented by United States) and IP/26 (presented by Australia).

2.5 With respect to regional and inter-regional activities, the meeting is reminded that a "kick-off" global coordination meeting convened by the ICAO and hosted by EUROCONTROL in Brussels, Belgium, from 4 to 5 March 2013, was intended for representatives of the regional OPMET databanks/gateways to initiate discussions on the development of a coordinated global response to the implementation of digital aeronautical meteorological information (ROBEX WG/11 – IP/5 refers).

2.6 The aforementioned coordination meeting, in which Thailand represented the Asia/Pacific RODBs, made a number of recommendations including the following: a) the development of a concept of operations for the implementation of XML/GML by regional OPMET centres; b) the adaptation of the terms of reference of the regional OPMET (consultative) groups to support implementation of XML/GML; and c) the recognition of the continued need for inter-regional collaboration with respect to progress on XML/GML implementation.

2.7 With respect to the recommendation a) above, the EUR Data Management Group has been developing the *Concept of Operations for the Transition of OPMET Data Exchange using IWXXM to enable SWIM*. This concept of operations document is expected to be mature enough by EUR METG/25 (in September 2015) to be considered as guidance material for EUR and possibly other Regions to support planning and implementation of digital OPMET exchange.

2.8 With respect to the recommendation b) (in paragraph 2.6), the meeting is reminded that the terms of reference and work plan of the ROBEX WG currently refer to future trends in OPMET exchange, the transition to digital exchange of OPMET and the implementation of XML/GML.

2.8 With respect to the recommendation c) (in paragraph 2.6), and noting that planning and implementation issues for the digital exchange of aeronautical meteorological information are largely of an inter-regional nature, the meeting is apprised of the following list of points drafted in the EUR/NAT Region representing some of the issues that will likely need to be addressed in the near or not too distant future:

- a) define conversion centres (Traditional Alphanumeric Character – TAC to IWXXM);
- b) define procedures on how to deal with errors in IWXXM-messages;

- c) define procedures for future translation centres (e.g., error handling in converted TAC-reports);
- d) define testing platforms;
- e) define inter-regional exchanges solely based on required FASID data;
- f) define the inter-regional data/bulletins to be exchanged;
- g) develop inter-regional testing;
- h) develop inter-regional procedure to notify the changes and new IWXXM bulletins;
- i) develop intra-regional plans to follow the infrastructure AMHS links planned by their ROCs, IROGs, RODBs;
- j) develop intra-regional plans to follow the infrastructure AMHS links planned and IWXXM data exchange planned by the States to their ROC;
- k) update contingency plans for ROCs/IROGs by introducing IWXXM;
- l) identify metadata sources;
- m) process and notify modifications related to changes to metadata;
- n) define rules on how to interrogate RODBs that may include web feature services noting no conversion would take place at RODBs;
- o) define procedure for States who need their OPMET data translated;
- p) define legal impacts to translation centre in case data translated is wrong or incomplete; and
- q) provide guidance on cost recovery related to services for a ROC, RODB, IROG, etc., to exchange data in digital form.

2.9 In view of the significant number of infrastructure, technology and coordination issues highlighted by the EUR/NAT Region above, and the various degrees to which planning and implementation of digital exchange of OPMET has progressed as indicated in the reports presented by States, the meeting may agree that an inter-regional ICAO workshop promoting collaboration between experts from ROCs, RODBs, IROGs, WMO, EUROCONTROL and other relevant authorities/organizations/administrations would be an effective way to build capacity in the Asia/Pacific (and other Region/s) for the implementation of digital exchange of aeronautical meteorological information.

2.10 In view of the discussion above, the meeting may therefore consider formulating a draft decision based on the following:

(ROBEX WG/13) Draft Decision 13/x – Capacity building workshop to facilitate planning and implementation of digital exchange of aeronautical meteorological information

That, the ICAO be invited to organize and conduct a workshop in the first half of 2016 to build capacity in States for digital exchange of aeronautical meteorological information. The workshop should facilitate intra- and inter-regional planning and implementation activities and, as such, consideration should be given to organizing the workshop as an inter-regional event.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Note the information contained in this paper; and
- b) Develop a draft decision based on the proposal in paragraph 2.10.
