



International Civil Aviation Organization

**MIDANPIRG Meteorology Sub-Group
Fourth Meeting (MET SG/4)**

(Cairo, Egypt, 25 – 27 June 2013)

Agenda Item 3: Review of Recent and Forthcoming Global Developments

EXCHANGE OF METAR/SPECI, TAF AND SIGMET VIA XML

(Presented by the Secretariat)

SUMMARY

This paper describes the way forward in developing a concept of operations on ICAO Meteorological Exchange Model (IWXXM) with an initial focus on the exchange of METAR/SPECI, TAF and SIGMET in digital form (e.g. XML).

1. INTRODUCTION

1.1 Amendment 76 to Annex 3 applicable November 2013 will enable the exchange, under bilateral agreements between States in a position to do so, of METAR and SPECI, TAF and SIGMET in digital form. These MET elements in digital form shall be formatted in accordance with a globally interoperable information exchange model and shall use extensible markup language (XML)/geography markup language (GML). These MET elements in digital form shall be accompanied by the appropriate metadata. Guidance on the information exchange model, XML/GML and the metadata profile is provided in the Manual on Digital Exchange of Aeronautical Meteorological Information which is being developed. (Reference Green Edition of Amendment 76 to Annex 3, Appendix 3, 2.1.3, 2.1.4, 2.1.5; Appendix 5, 1.1.2, 1.1.3, 1.1.4; Appendix 6, 1.1.6, 1.1.7, 1.1.8).

1.2 As noted in the rationale of this proposal, *this is the first step of the full migration which will occur in subsequent amendments to Annex 3 as new requirements are developed and fully in line with the planned migration of aeronautical information management (AIM) as will be reflected in Annex 15 – Aeronautical Information Services.*

1.3 Priority on implementing this capability is on States that host a Regional OPMET Centre (ROC) and/or Regional OPMET Data Bank (RODB). In EUR, there are three ROCs: London, United Kingdom, Toulouse, France, and Vienna, Austria, and three RODBs: Brussels, Belgium, Toulouse France, and Vienna Austria. Therefore, there is a priority to have Austria, Belgium, France and the United Kingdom to develop the capability of exchanging METAR and SPECI, TAF and SIGMET in digital form.

1.4 Likewise, it will be essential for State(s) designated to host a ROC and/or RODB in the MID Region to develop the capability of exchanging METAR and SPECI, TAF and SIGMET in digital form.

2. DISCUSSION

2.1 A coordination meeting for regional representatives of the regional operational meteorological (OPMET) databanks/gateways was held at the European Organisation for the Safety of Air Navigation (EUROCONTROL) in Brussels, Belgium from 4 to 5 March 2013. The meeting developed several actions which included the development of Concept of Operations for ICAO Meteorological Exchange Model (IWXXM). The Concept of Operations would be developed by the EUR Data Management Group (DMG) in coordination with Eurocontrol, World Meteorological Organization (Ad Hoc Task Team on Aviation XML (TT-AvXML)) and reviewed by the Meteorological Aeronautical Requirements and Information Exchange Project Team (MARIE-PT).

2.2 In order to support this effort, the MID BMG of MET SG will propose adapting the terms of reference to read as follows:

- Task title: ICAO Meteorological Exchange Model (IWXXM);
- Task: To support MARIE-PT or any subsequent governance group appointed by ICAO in the Regional implementation of IWXXM within (REGION – e.g. EUR, APAC, AFI...). The initial implementation emphasis will be placed on States hosting ROCs/RODBs. Progress report to be provided to EUR METG.

The other ICAO regions with OPMET exchange groups will also propose this text to their work programme.

2.3 The concept of operations to be developed should address a list of questions developed by the meeting as well as MARIE-PT such as the source of data and storage, traceability including whether a transformation (XML to TAC or TAC to XML) took place and where it was transformed, who should make transformations, how to treat non-standard data and conversions maximum number of groups related to certain parameters, missing data due to captor problem, compression/decompression techniques, inter-regional exchange, new request mode requiring XML data to RODB and many other issues identified by the group. The issues identified are provided in the **Attachments** which are expected to be consolidated in due time.

2.4 Since different issues identified would be best addressed by different entities (e.g. World Meteorology Organization, Eurocontrol, EUR Data Management Group), a skeleton of general issues will be drafted by the EUR DMG. The skeleton of general issues to be developed by the appropriate entity will be reviewed by MARIE-PT before being developed further.

2.5 Progress on the concept of operations is expected to be reviewed at the EUR DMG/9 meeting in June 2013.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the contents of this paper; and
- b) consider updating the BMG work programme as proposed in paragraph 2.2.