



International Civil Aviation Organization

**FIFTEENTH MEETING OF THE ASIA/PACIFIC METEOROLOGICAL
INFORMATION EXCHANGE WORKING GROUP
(MET/IE WG/15)**

Bangkok, Thailand, 20 – 22 March 2017

**Agenda Item 4: Planning and Implementation of digital exchange of meteorological
information**

UPDATE ON THE ICAO METP WG-MIE
(Presented by Australia)

SUMMARY

This paper presents a summary of the status of matters being considered by ICAO METP WG-MIE.

1. INTRODUCTION

1.1 The Meteorological Panel established several working groups including a Working Group on Meteorological Information Exchange (WG-MIE) to assist with the work programme of the panel. The objective of the METP WG-MIE is to work collaboratively to ensure the smooth transition to the provision and exchange of MET information in digital format (IWXXM) and into the System Wide Information Management System (SWIM) environment.

1.2 During the last year, the METP WG-MIE has held 7 video-conference (WebEx) meetings and one face to face meeting in Paris during May 2016, to progress its work programme.

1.3 The second meeting of ICAO Meteorology Panel (METP2) was held, 17-22 October 2016, in Montreal Canada and reviewed the work programme and the output of METP WG-MIE. This paper summarises some of the key outcomes from WG-MIE during the last year.

2. DISCUSSION

Delay to IWXXM Standard

2.1 As of November 2016, distribution of IWXXM messages was raised to a 'Recommended Practice' within Annex 3. Given the poor status of global implementation of IWXXM and extended AMHS (based on regional surveys), the WG-MIE proposed that IWXXM exchange becoming an Annex 3 'Standard' should be delayed to November 2020 (aligned to Amendment 79 to Annex 3). WG-MIE also proposed that to ensure States had advance notice of the timing of IWXXM exchange becoming a standard, Amendment 78 to Annex 3 (effective November 2018) would specifically state that IWXXM exchange will become a standard in November 2020.

IWXXM Guidance

2.2 To assist with standardised implementation of IWXXM, the WG-MIE has further formulated guidelines, to facilitate controlled, consistent and efficient transition towards the production and distribution of IWXXM messages. The guidance is entitled "*Guidelines for the Implementation of OPMET data exchange using IWXXM*". A separate paper is provided on this document.

IWXXM Extensions

2.3 The inclusion of standardized 'Extensions' in the ICAO Meteorological Information Exchange Model (IWXXM) has been discussed. IWXXM has adopted XML/GML to be used for the exchange of a range of meteorological products identified in Annex 3. XML schemas are specifically 'extensible', and as such allow for additional data (i.e. extensions) to be included with the full message, without interfering with the message, content, dissemination, and integrity. The METP2 agreed that 'Extensions', properly identified and following standards for such extensions (in the IWXXM schema) should be allowed, although further work was required to prevent abuse of extensions and enforced by a maximum message size.

Changes to IWXXM Schema

2.4 The METP agreed that changes to the IWXXM schema that require modification of the IWXXM representations of information, a standing working practice be introduced requiring that the applicability date should not be sooner than eighteen months following publication of the amendment to Annex 3.

SWIM and Digital Exchange

2.5 The WG-MIE is working on the development of provisions to enable the inclusion of meteorological information in the future system-wide information management (SWIM) environment. A draft *Plan for Meteorology in System Wide Information Management (SWIM)* and draft *Roadmap for Meteorology in System Wide Information Management (SWIM)* are being developed and were presented to METP2. It's noted that the *Manual on System Wide Information Management* (Doc 10039) describes the overall SWIM concept, along with key goals and characteristics of the SWIM system. The MET-SWIM Plan supplements Doc 10039 with further detail on the exchange of aeronautical meteorology information within SWIM and will likely form an appendix to Doc 10039.

2.6 The METP agreed that general-purpose TCP/IP (specifically HTTP) communications are required for exchanging data with web services and non ATS-messaging protocols (e.g. AMQP), as described in Doc. 10039, for SWIM.

2.7 The METP and METP WG-MIE have discussed testing IWXXM messages over AMHS extended services and other communications requirements heading towards a SWIM environment. It has been agreed that the testing of AMHS for information (existing or newly developed) should initially be focused on Traditional Alphanumeric Code (METAR/SECI, TAF, SIGMET, AIRMET, TCA, VAA) and not be concerned with the exchange of gridded data. The WG-MIE is endeavouring to seek support from the Communications Panel Secretary to facilitate the necessary testing.

IWXXM Statistics

2.8 The WG-MIE is currently developing a policy paper which will describe which IWXXM statistics should be collected by RODBs/ROCs and SADIS/WIFS. The statistics include availability, timeliness, IWXXM validation, operational/non-operational, data volume and use of extensions.

2.9 It is proposed that validation would be made available and presented per ICAO region, then per State, then per location indicator (CCCC) with each time an aggregation from the sublevels to the upper level CCCC -> State -> Region

Other Changes & Developments

2.10 The METP agreed that Annex 3 should be modified to include additional fields in VAA, TCA and SIGMET/AIRMET, to indicate the operational status (TEST or EXERCISE) events. This change is to be included in the proposed draft Amendment 78 of Annex 3.

2.11 The WG-MIE have also prepared updates to the *Manual of Aeronautical Meteorological Practice* (Doc 8896) and *Manual on the Digital Exchange of Aeronautical Meteorological Information* (Doc 10003) which are expected to be published in the coming months.

3. ACTION REQUIRED BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this papers; and
- b) discuss any relevant matters as appropriate.
