



International Civil Aviation Organization

**NINETEENTH MEETING OF THE METEOROLOGY SUB-GROUP
(MET SG/19) OF APANPIRG**

Bangkok, Thailand, 3 – 6 August 2015

Agenda Item 6: Research, development and implementation issues in the MET field

6.4) OPMET exchange

STATUS AND PLANS FOR IWXXM IMPLEMENTATION WITHIN APAC

(Presented by Australia)

SUMMARY

This paper describes requirements for implementing XML-formatted OPMET (IWXXM) and requests States response to a survey about their plans for IWXXM and AMHS.

1. INTRODUCTION

1.1 Effective with Amendment 76 to ICAO Annex 3 – Meteorological Service for International Air Navigation (applicability Nov. 2013), exchange of METAR, SPECI, TAF and SIGMET may be done in digital form under a bilateral agreement between States in a position to do so. When approved, Amendment 77 to Annex 3 will make this a recommendation and will also include Volcanic Ash Advisory, Tropical Cyclone Advisory and AIRMET in IWXXM format. It is envisaged that OPMET exchange in IWXXM format will become an Annex 3 Standard requirement with Amendment 78, which is likely to become effective in November 2018.

1.2 The World Meteorological Organization (WMO) formed a Task Team on Aviation XML (TT-AvXML) to identify the meteorological information that WMO must represent in the aviation XML standard in response to recommendations and future requirements from ICAO. The result was the development of IWXXM.

1.3 Details of IWXXM are included in the Manual on the Digital Exchange of Aeronautical Meteorological Information (ICAO Doc 10003).

1.4 Therefore by November 2018 (i.e. within the next 40 months) all States will be required to exchange XML-formatted OPMET (IWXXM).

2. DISCUSSION

2.1 Currently, only a small number of Asia and Pacific (APAC) States have indicated readiness to generate XML-formatted OPMET information; even fewer have indicated the ability to exchange such data.

2.2 Given the size and character set of IWXXM messages, it will not be possible for these messages to be transmitted by the Aeronautical Fixed Telecommunication Network (AFTN). Therefore, IWXXM messages will need to be transmitted over the ATS Message Handling System (AMHS). It is likely that bulletins will be compressed and transferred as File Transfer Body Part (FTBP) and may require Extended AMHS (rather than Basic AMHS) links.

2.3 OPMET monitoring reported by IATA and RODBs at ROBEX meetings and annual SIGMET tests, has highlighted that some States' OPMET messages are not fully compliant with formats defined in Annex 3. It should be noted, however, that it will only be possible to exchange Annex 3-compliant OPMET messages internationally using the IWXXM format. Therefore, whilst some States may wish to maintain differences to ICAO Annex 3 for domestic operations, it is envisaged that, future amendments to Annex 3 (developed under the auspices of the ICAO Meteorology Panel) will make it necessary for States to generate Annex 3-compliant IWXXM messages by November 2018.

2.4 In summary the exchange of XML-formatted OPMET data requires data to be IWXXM compliant and also requires the availability of AMHS (likely to be "Extended AMHS") communications. Both aspects (i.e., implementation of IWXXM and AMHS) are potentially significant undertakings for States and need significant planning and commitment in order for implementation to be completed in time to comply with the expected applicability of new Annex 3 standards.

2.5 In order to generate IWXXM compliant messages, some States are:

- a. developing in-State bespoke application/scripts to convert traditional alphanumeric code (TAC) messages to XML;
- b. procuring commercial solutions to convert TAC messages to IWXXM; or
- c. arranging for another State to convert TAC messages on behalf (e.g., through an international IWXXM-capable organization or RODB).

2.6 To monitor progress with the implementation of both IWXXM compliant OPMET and AMHS communications, we request that the ICAO APAC Secretariat send a State Letter requesting States complete the survey contained in Attachment A.

2.7 In order to facilitate discussion at METSG/19, States are requested to complete the survey at Attachment A prior to, or at, METSG/19 and provide the response to APANPIRG ROBEX WG Chair (t.hailes@bom.gov.au) for collation.

3. RECOMMENDATION

3.1 It is recommended that the METSG/19 adopts the following draft Conclusion:

Draft Decision 19/x – IWXXM and AMHS Survey

That, the ICAO APAC Secretariat send a State Letter requesting States to complete the survey at Attachment A prior to 30 November 2015.

4. ACTION BY THE MEETING

4.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) review the survey contained in Attachment A;
- c) discuss the preliminary survey responses provided;
- d) discuss any relevant matters as appropriate; and
- e) adopt the conclusion in paragraph 3.1

ATTACHMENT A – Proposed Survey

This survey is intended to inform ICAO APANPIRG on the status of planning and implementation of IWXXM and AMHS links in APAC States necessary to conform to Annex 3 standards envisaged for applicability in November 2018.

Q1. Please provide the name of your State/Territory/Special Administration Region:

Q2. Please provide your name and contact details:

Q3. Please confirm if your State is aware that ICAO has initiated work on the development of future standards in Annex 3 for the international exchange of XML-formatted OPMET, including SIGMET, TAF, METAR, SPECI & AIRMET, for potential applicability as early as November 2018?

Q4. Please indicate the status of planning and implementation of XML-formatted OPMET within your State:

- a) Not yet started
- b) Planning
- c) Procuring a solution
- d) Testing
- e) Operational

Q5. Please indicate which entity will generate XML-formatted OPMET for your State:

- a) National Meteorological Service Provider
- b) National Air Navigation Service Provider (ANSP)
- c) National Regional OPMET Databank (RODB)
- d) Not yet determined
- e) Other, e.g., from another State (please specify)

Q6. Please indicate whether or not your State has access to an AMHS connection for sending IWXXM data internationally:

- a) Yes, and it currently supports Extended AMHS
- b) Yes, and it supports Extended AMHS although this is not configured
- c) Yes, but it does not support Extended AMHS
- d) No
- e) Not sure

Q7. If you answered no to Q6, i.e., d), please indicate whether or not your State has plans to implement AMHS:

- a) Yes, during 2015
- b) Yes, during 2016
- c) Yes, during 2017
- d) Yes, during 2018
- e) No
- f) Not sure
- g) Other (please specify)

Q8. Please indicate whether or not your State is planning to convert XML-format OPMET messages to traditional alphanumeric code (TAC):

- a) Yes, during 2015
- b) Yes, during 2016
- c) Yes, during 2017
- d) Yes, during 2018
- e) No
- f) Other (please specify)
