



ASSEMBLY — 41ST SESSION

TECHNICAL COMMISSION

Agenda Item 31: Aviation Safety and Air Navigation Standardization

SUPPORT OF THE VENEZUELAN STATE FOR THE DEVELOPMENT AND IMPLEMENTATION OF THE IWXXM MODEL FOR THE EXCHANGE OF OPMET MESSAGES

(Presented by Venezuela (Bolivarian Republic of))

EXECUTIVE SUMMARY

The following Working Paper presents the activities undertaken by the Venezuelan State related to the development and implementation of the ICAO meteorological information exchange model (IWXXM) model and offers support to countries that require it to develop and implement an encoder to convert aerodrome routine meteorological report (METAR) - aerodrome forecast (TAF) messages from TAC format to XML format.

Action: The Assembly is invited to:

- a) take note of the information presented in this working paper; and
- b) take this input into account for the development and implementation of IWXXM and consider establishing global mechanisms to facilitate support tools for States that require them.

<i>Strategic Objectives:</i>	This working paper relates to the Air Navigation Capacity and Efficiency Strategic Objectives.
<i>Financial implications:</i>	It is proposed that the activities referred to in this paper be carried out with the resources available in the regular programme budget for the current triennium and/or with extra budgetary contributions
<i>References:</i>	Doc 10039, <i>Manual on System Wide Information Management (SWIM) Concept</i> Doc 10003, <i>Manual on the ICAO Meteorological Information Exchange Model</i> Doc 9750, <i>Global Air Navigation Plan (GANP)</i> Aviation System Block Upgrades (ASBU)

¹ Spanish version provided by Venezuela (Bolivarian Republic of).

1. INTRODUCTION

1.1 In 2013, amendment 76 to Annex 3 of ICAO, in Appendices 3 and 4, indicated that METAR, SPECI and TAF should be exchanged through bilateral agreements between States that have the capability to do so, using a digital format, with recommended use of extensible markup language (XML) and geography markup language (GML).

1.2 Subsequently, in 2015, Amendment 77 to Annex 3 indicated as a recommendation to States that meteorological data and reports be transmitted in XML/GML format, and that implementation should begin in November 2016.

1.3 In 2015, the Venezuelan State began developing METAX, an application to encode OPMET METAR-TAF messages in traditional (TAC) format and digital (XML) format. Currently, the METAX encoder is embedded in the Integrated Meteorological Transmission System (Sistema Integrado de Transmisión Meteorológica, SITMET) belonging to the Aviation Meteorology Service (Servicio de Meteorología de la Aviación, SERVMETAVIA).

1.4 On 7 March 2018, the Council of the International Civil Aviation Organization (ICAO) approved Amendment 78 to the international Standards and Recommended Practices, Meteorological Service for International Air Navigation (Annex 3 to the Convention on International Civil Aviation), which came into effect on 16 July 2018 and was implemented as from 8 November 2018, except for provisions that had an implementation date, which in the case of the implementation of IWXXM was 5 November 2020 as the standard for the exchange of OPMET information.

1.5 In evaluating the implementation of IWXXM, the Automatic Meteorological Information System (Sistema Automático de Información Meteorológica, SAIMET) was developed for the National Institute of Meteorology and Hydrology (Instituto Nacional de Meteorología e Hidrología, INAMEH) to store data recorded by aeronautical meteorological stations located at different airports in the country and to issue automatic METAR bulletins in TAC and XML format, which comply with the IWXXM schemas.

1.6 In 2020 a standard version of the IWXXM encoder was developed, to be adapted for any State that is interested and requires support.

2. ANALYSIS

2.1 Currently Venezuela, through the Aviation Meteorology Service (SERVMETAVIA) with the Integrated Meteorological Transmission System (SITMET) and the National Institute of Meteorology and Hydrology (INAMEH) with the Automatic Meteorological Information System (SAIMET), automatically issues bulletins with METAR (both systems), TAF, SPECI and SIGMET (SITMET) aeronautical meteorological messages in TAC and XML formats, created according to the schema of the ICAO meteorological information exchange model (IWXXM) version 3.0, thereby complying with the ICAO requirement on encoding METAR-TAF messages in XML format for the OPMET exchange.

2.2 With the development of both systems, Venezuela is capable of participating in the exchange of OPMET information in XML/GML format, as set out in Annex 3 of ICAO, and is also able to collaborate with States who request assistance in developing and implementing METAX.

2.3 The Venezuelan State is one of the few countries in the world that has developed an encoder for OPMET messages as established in the formats and schemas of the ICAO meteorological information exchange model (IWXXM) and is capable of assisting States that request it, with advice on the

implementation of METAX and coding software for bulletins with METAR-SPECI-TAF-SIGMET messages.

3. CONCLUSION

3.1 The ICAO Assembly is invited to:

- a) Evaluate the current status of States' implementation of IWXXM and develop a work plan on its implementation.
- b) Take into account that the Venezuelan State is available to provide advice and support with the experience it has gained in developing the METAX encoder for IWXXM, as a result of which the OPMET exchange will be in XML as the standard.
- c) Take into account the input set out in this Working Paper for the development and implementation of IWXXM in States that have not yet made any progress.
- d) Promote capacity-building activities to on-board and train personnel with the support of Venezuela for the implementation of IWXXM.
- e) Evaluate the creation of a working group for the development of IWXXM and appoint State focal points, taking as a basis the experience of some member States in the implementation of the ICAO meteorological information exchange model.

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