International Civil Aviation Organization

INFORMATION PAPER

Asia and Pacific (APAC)
Twenty-first Meeting of the Meteorological Information Exchange Working Group (MET/IE WG/21)

Bangkok, Thailand, 27 to 29 March 2023

Agenda Item 4: Meteorological information exchange in digital form

UPDATES ON THE IMPLEMENTATION OF IWXXM IN CHINA

(Presented by China)

SUMMARY

This paper presents the recent update and experience on implementation of OPMET exchange in ICAO Meteorological Information Exchange Model (IWXXM) in China.

1. INTRODUCTION

1.1 The requirement of digital exchange of aeronautical meteorological information, including METAR/SPECI, TAF, SIGMET, AIRMET, Volcanic Ash Advisory, Tropical Cyclone Advisory and Space Weather Advisory, in IWXXM GML form became applicable on 5 November 2020 according to Amendment 79 to ICAO Annex 3.

1.2 The following sections introduce the recent progress and some experiences regarding the implementation of OPMET exchange in China.

2. DISCUSSION

IWXXM Implementation in China and Some Experiences

2.1 China is currently using translation as the primary mode of IWXXM MET message generation.

2.2 China has completed the IWXXM translation for METAR/SPECI/TAF reports in IWXXM V3.0 in Dec. 2021, and support the IWXXM translation for SIGMET reports in IWXXM V3.1 in 2022.

2.3 China also provides technical support about IWXXM MET translation to Mongolia in 2022, and summarizes some technical key point during the research of translation and the exchange of experiences.

2.3.1 IWXXM MET schema does not support the description like “R01/0800V2000U” in METAR/SPECI reports. For example, the METAR report in TAC format, “METAR ZSJN 091400Z VRB01MPS 2200 R01/0800V2000U BR NSC 02/02 Q1026 NOSIG=”, will fail translate. And the national regulation of China related with observation was updated in 2022, and eliminated this kind of description .

2.3.2 The prevailing visibility of METAR in TAC format will be written with 10000 in the IWXXM, which is shown as below. There is the detailed explanation in the IWXXM MET guidance: To report a prevailing visibility of at least 10000 meters, prevailing visibility is reported as 10000 meters and the prevailing visibility operator is reported as "above".

```
<iwxxm:AerodromeHorizontalVisibility>
<iwxxm:prevailingVisibility uom="m">10000</iwxxm:prevailingVisibility>
    <iwxxm:prevailingVisibilityOperator>ABOVE</iwxxm:prevailingVisibilityOperator>
</iwxxm:AerodromeHorizontalVisibility>
```

2.3.3 In accordance with ICAO Annex 3 Table A3-2, the trend forecast in METAR/SPECI needs to have direction of winds if this element is present. So IWXXM MET schema doesn't support "TEMPO VRB10G15MPS" in METAR/SPECI reports.

IWXXM Exchang Test

2.4 Following the test with ROCs Bangkok, Hongkong China and Australia in the past two yeas, the IWXXM MET exchanging tests with ROCs Tokyo and Singapore were conducted on May 25, 2022 and Feb. 7, 2023 respectively.

2.5 So far, China has been on trial operation stage and exchanging its IWXXM MET messages with the ROCs of Hong Kong China, Tokyo, Singapore and Australia, also receiving IWXXM MET messages from the ROCs of Bangkok at the same time.

Future Plans

2.6 China will continue to conduct further IWXXM MET exchange with other NOCs, ROCs and RODBs.

2.7 China plans to upgrade the METAR/SPECI/TAF to IWXXM V3.1 in 2023.

2.8 Generation from source in some international AMOs and MWOs of China will be progressively implemented when the respective systems generating the data from source are upgraded.

3. ACTION BY THE MEETING

3.1 Note the information contained in this paper.

– – – – – – – – – – – – – –