

International Civil Aviation Organization

ICAO

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**UPDATE ON IWXXM IMPLEMENTATION IN HONG KONG, CHINA**

(Presented by Hong Kong, China)

SUMMARY

This paper presents the recent update related to the implementation of ICAO Meteorological Information Exchange Model (IWXXM) in Hong Kong, China.

1. INTRODUCTION

1.1 The Hong Kong Observatory (HKO), as the Meteorological Service Provider, takes the role of a “IWXXM Producer” and generates OPMET data in IWXXM from source. The HKO has joined hands with Hong Kong Regional OPMET Centre (ROC) of Hong Kong Civil Aviation Department (HKCAD) in developing IWXXM translation and aggregation services and supporting IWXXM exchange over AMHS since November 2020. Previous works were presented in [MET SG/24 – IP/23](#), [MET/IE WG/19 – IP/08](#) and [MET/IE WG/20 – IP/07](#). The following sections provide the recent update related to the implementation of IWXXM in Hong Kong, China.

2. DISCUSSIONIWXXM generation software upgraded to support IWXXM version 2021-2

2.1 After IWXXM Version 2021-2 was published by WMO in November 2021, the HKO upgraded the IWXXM generation software to support the latest release of schema files for IWXXM version 2021-2. The HKO started to routinely generate METAR/SPECI and TAF in IWXXM version 2021-2 format and send to AMHS test system of ROC Hong Kong in November 2022 for internal trial. At the most recent ICAO regional SIGMET tests that were conducted in November 2022, the HKO successfully generated and issued TEST SIGMETs for tropical cyclone, volcanic ash and other weather phenomena in IWXXM version 2021-2 format.

Translation and validation services for IWXXM version 2021-2

2.2 ROC Hong Kong had been translating OPMET data issued by The Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) and Macao Aeronautical Meteorological Centre from TAC to IWXXM. ROC Hong Kong further conducted validation of the translated IWXXM messages before they were accepted for aggregation and dissemination to ensure the message quality for operational use by downstream users. Table 1 showed the statistics for IWXXM

version 2021-2 from 1 December 2022 to 27 February 2023. The overall successful translation and validation rates reached 99% or above for TAF, METAR and SIGMET.

Table 1: Success rates of IWXXM translation and validation services provided by ROC Hong Kong

	TAF			METAR			SIGMET
	Philippines	Macao China	Overall	Philippines	Macao China	Overall	Philippines
No. of reports successfully translated	2486	344	2830	13574	4421	17995	458
Percentage of successful translation and validation	99.5%	99.4%	99.5%	98.9%	99.1%	99.0%	100%

Updated AMHS path for IWXXM dissemination

2.3 Hong Kong, China continued to disseminate IWXXM reports to seven ROCs in APAC Region as indicated in Table 2. The AMHS paths for IWXXM dissemination to ROCs Singapore, Kuala Lumpur, Brisbane and Wellington were reconfigured back to the official dissemination paths through Bangkok (VTBB) in September 2022, as the file size limitation of 6 KB at some nodes of the original AMHS paths no longer existed. ROC Hong Kong had also resumed disseminating aggregated IWXXM TAF messages to ROC Bangkok.

Table 2: Operational AMHS paths for IWXXM dissemination from ROC Hong Kong to other ROCs

Destination (ROC)	AMHS path	Type of IWXXM report	Status
Bangkok	VHHH-VTBB	METAR/SPECI, TAF, SIGMET	Operational
Beijing	VHHH-ZBBB	METAR/SPECI, TAF, SIGMET	Operational
Brisbane	VHHH-RPLLVTBB-WSSS-YBBB	METAR/SPECI, TAF, SIGMET	Operational
Kuala Lumpur	VHHH-RPLLVTBB-WSSS-WMKK	METAR/SPECI, TAF, SIGMET	Operational
Singapore	VHHH-RPLLVTBB -WSSS	METAR/SPECI, TAF, SIGMET	Operational
Tokyo	VHHH-RJJJ	METAR/SPECI, TAF, SIGMET	Operational
Wellington	VHHH-RPLLVTBB -WSSS-YBBB-NZCH	METAR/SPECI, TAF, SIGMET	Operational

IWXXM exchange test with other States

2.4 An IWXXM exchange test between Cambodia and Hong Kong, China was conducted on 12 October 2022. During the test, NOC Phnom Penh (VDPP) disseminated IWXXM METAR, TAF and SIGMET messages in IWXXM version 3.0 format to ROC Hong Kong, and the messages were received by HKO and validated successfully. NOC Phnom Penh also received the IWXXM-formatted OPMET data disseminated by HKO. The test demonstrated the capability of Cambodia in the implementation of IWXXM generation and exchange over AMHS.

2.5 Hong Kong, China will continue to conduct further IWXXM exchange test with other NOCs and ROCs as necessary to facilitate the international exchange of IWXXM messages via AMHS in the APAC Region.

3. ACTION BY THE MEETING

3.1 Note the information contained in this paper.

