International Civil Aviation Organization

The Fifth Meeting of System Wide Information Management Task Force (SWIM TF/5)

Video Tele-conference, 9 – 11 August 2021.

Agenda Item 9: State, Regional and Global SWIM Updates

UPDATES ON THE DEVELOPMENT OF THE ICAO METEOROLOGICAL INFORMATION EXCHANGE MODEL (IWXXM)

(Presented by Hong Kong China)

SUMMARY

This paper summarizes updates on the development of IWXXM as discussed in ICAO METP/5 and associated works being carried out by the ICAO METP working groups and WMO Task Team on Aviation Data (TT-AvData).

1. INTRODUCTION

1.1 The ICAO METP discussed the development of IWXXM in its fifth meeting (METP/5) in Jun 2021. This paper summarizes the outcomes relevant to its application in the SWIM environment and subsequent works being carried out by the ICAO METP working groups and WMO TT-AvData[1].

2. DISCUSSION

2.1 The new IWXXM design mentioned in SWIM TF/4 IP/8 was reviewed in METP/5. The Panel noted that the new design is rather generic and further exploration would be required to fine-tune the information model to meet new and potential end-user use cases by the Working Group on Meteorological Information Exchange (WG-MIE) in collaboration with the Working Group on Meteorological Requirements and Integration (WG-MRI) and the Working Group on Meteorological Information Service Development (WG-MISD). The Panel agreed to share the new IWXXM design concepts with the other ICAO Panels and their working groups, including the Information Management Panel (IMP) and Air Traffic Management Requirements and. Performance Panel (ATMRPP), to engage end-users to re-consider their use cases and associated meteorological information requirements.

2.2 WG-MIE introduced the concept of developing an Aerodrome Observation in IWXXM in METP/5. The Panel noted that the WG-MIE had reached a consensus that the constraints of current IWXXM schemas designed to align with the current Traditional Alphanumeric Code (TAC) products would hinder the adoption of IWXXM by stakeholders and limit its future use, and that a viable solution lies in divorcing the IWXXM from its TAC origins entirely by the development of an Aerodrome Observation in IWXXM. Furthermore, it was possible to expand the IWXXM format for METAR/SPECI to transport elements specifically related to local routine/special report as well, to meet the requirements for the provision of LOCAL ROUTINE/SPECIAL REPORTS beyond the aerodrome

[1] Hong Kong Observatory (HKO) has been actively participating in WMO TT-AvData and the development of IWXXM.

of origin. The Panel agreed with the conclusion and assigned WG-MIE and WG-MRI to collaboratively develop the concept of Aerodrome Observation.

2.3 The WMO TT-AvData, in view of METP's decision mentioned in Paras. 2.1 and 2.2 above, had decided to realize IWXXM schemas for the new information in the new IWXXM Weather Object (WxObject) approach. Development work has already been started and draft schemas are targeted to be made available for public consultation by Q2 2022 with a view to align with the State consultation period of the proposals to Amendment 81 to Annex 3.

2.4 METP/5 also discussed and approved the inclusion of proposals to introduce new information to be provided in ICAO Annex 3. This includes the provision of Volcano Observatory Notice for Aviation (VONA) and information on Quantitative Volcanic Ash (QVA) clouds in IWXXM format.

2.5 Recalling the intention of adopting the WxObject approach in modelling IWXXM is to allow high-fidelity data and new data forms, and provide better support to information exchange in a SWIM environment. Contribution on existing and future use cases, especially those involving consolidation or fusion of information from multiple domains, are particular valuable to the development work. SWIM TF may want to consider encouraging its stakeholders to re-consider their use cases and associated meteorological information requirements and forward them to ICAO METP WG-MIE and WMO TT-AvData for their studying.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper,

b) encourage the stakeholders to provide feedback on operational use cases; and associated meteorological information requirements as mentioned in Para. 2.4, as necessary, for study by ICAO METP WG-MIE and WMO TT-AvData.

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