International Civil Aviation Organization

INFORMATION PAPER

Twenty-fourth Meeting of the Meteorology Sub-group (MET SG/24) of the Asia and Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG)

Web-conference, 16 – 20 November 2020

Agenda Item 5: Research, development, and other initiatives

CURRENT STATUS AND PLAN OF IWXXM IMPLEMENTATION IN INDONESIA

(Presented by Indonesia)

SUMMARY

This paper presents the progress and plan for the implementation of the ICAO Meteorological Information Model (IWXXM) in Indonesia.

1. INTRODUCTION

1.1 The ICAO Annex 3 (Amendment 78) provision requires that OPMET data shall be disseminated in the IWXXM GML form.

1.2 With regards to the implementation of IWXXM for digital OPMET exchange, BMKG as a meteorological service provider and AirNav Indonesia as an air navigation service provider, in coordination with DGCA of Indonesia, have progressed some initial efforts since early 2019. The national testing on the exchange of IWXXM messages using a newly-established system between respective agencies' clients was conducted in February 2020.

2. DISCUSSION

Initial Preparation

2.1 BMKG has developed in-house software to convert OPMET data to the IWXXM format 3.0. Conversion of OPMET data from TAC forms to IWXXM forms enables the data receipt in the AMHS. OPMET data produced and disseminated by meteorological stations in TAC forms will be converted to IWXXM forms, using in-house software, in the upgraded BMKG's server which is planned to be located in the ROC/NOC.

2.2 Generated IWXXM data was validated using the validator provided in the NCAR's GitHub page (https://github.com/NCAR/crux). This process, at once, was aimed to ensure that the data converted to XML form to the IWXXM format.

IWXXM data exchange Testing

2.3 Indonesia has conducted the national IWXXM data exchange trial on 14 February 2020. The testing successfully transferred IWXXM data between 2 (two) User Agents via AMHS located in the regional OPMET center (WIII). Data transfer was performed using the AMHS protocol. A stress load test was also applied in the trial which was divided into 3 (three) stages; 100 data, 200 data, and 400 data, which were sent to the agent in parallel. The User-Agent received all complete data in all stages orderly. The trial result is that the system worked well in national IWXXM messages exchange.

2.4 After the national testing, Indonesia has conducted the regional IWXXM data exchange testing with RODB Singapore on 12 November 2020. In this testing, Indonesia succeeded in sending OPMET data in IWXXM format 3.0 and was well received by RODB Singapore with a transmission scheme via body part.

Plan

2.5 Indonesia will prepare the IWXXM dissemination system at the ROC/NOC Indonesia.

3. ACTION BY THE MEETING

3.1 Note the information contained in this paper

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