International Civil Aviation Organization

Eleventh Meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/11)

Bangkok, Thailand, 19 - 22 March 2024

Agenda Item 7: * Readiness of AMHS to support IWXXM

DESCRIPTION OF FAA AMHS SWIM GATEWAY AND IWXXM STATUS

(Presented by USA / Federal Aviation Administration)

SUMMARY

The FAA is developing an AMHS SWIM Gateway to enable international exchange of the ICAO Meteorological Information Exchange Model (IWXXM) data. This working paper describes that effort and status.

1. INTRODUCTION

1.1 The Federal Aviation Administration (FAA) is currently developing an Air Traffic Services (ATS) Message Handling System (AMHS) to System Wide Information Management (SWIM) Gateway that will be implemented as an enhancement to the FAA's operational AMHS. This AMHS SWIM Gateway (ASG) will support international exchange of XML-formatted messages encoded using the ICAO Meteorological Information Exchange Model (IWXXM).

2. DISCUSSION

2.1 The ASG will integrate with the FAA's existing ISODE AMHS software.

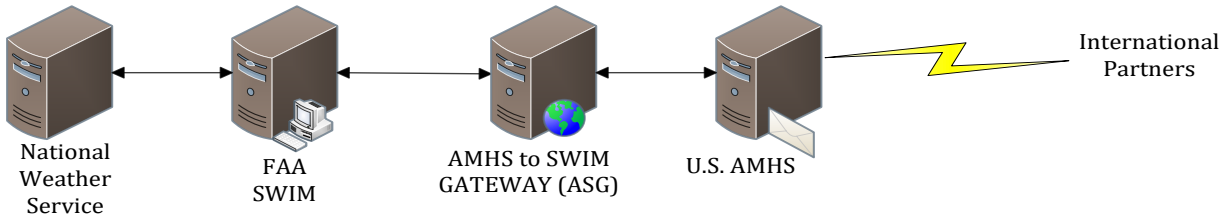
2.2 The ASG will send and receive Operational Meteorology (OPMET) data formatted using IWXXM utilizing AMHS File Transfer Body Part (FTBP) attachments. This exchange method integrates with the existing AMHS X.400 message software, whose method of sending attachments is FTBP.

2.3 The ASG will connect to the FAA SWIM in a bi-directional manner.

2.4 IWXXM data will be originated by the United States National Weather Service (NWS) and published to the FAA via SWIM. The ASG will consume this data, generate an AMHS-compliant message that includes the IWXXM data as an FTBP attachment, and distribute the message through AMHS to international users.

2.5 The ASG will also receive incoming data from the AMHS MTA, extract the IWXXM portion from the FTBP, and publish the data to SWIM. There the data becomes available to SWIM

consumers, including the NWS.



2.6 The initial effort on the ASG has resulted in support of IWXXM 2.1 products, demonstrating the publication and consumption of IWXXM Terminal Aerodrome Forecasts (TAFs) using test data from the National Weather Service. Current work is focused on updates to support IWXXM 3.0, handle the remaining OPMET products to be disseminated in IWXXM, provide ASG redundancy, and establish a live connection to FAA SWIM to receive the NWS IWXXM data that will be generated by the NWS Weather Forecast Office.

2.7 It is anticipated that ASG development will be complete by Q3/2024, followed by internal testing and then external test with international partners. Operational implemention is dependent upon data production/consumption by the NWS.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper; and

b) discuss any relevant matter as appropriate

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