

International Civil Aviation Organization

ICAO

Eighth Meeting of Aeronautical Communication Service Implementation Co-ordination Group of APANPIRG (ACSICG/8)

Video Tele-Conference, 21 – 23 June 2021

Agenda Item 5: Review and update the AMHS/ATN Implementation Status

5.2 Report on the readiness status of AMHS to support IWXXM

Note: Member States are expected to provide readiness status for supporting IWXXM traffic (Annex 1)

DESCRIPTION OF FAA AMHS SWIM GATEWAY AND IWXXM STATUS

(Presented by Federal Aviation Administration/USA)

SUMMARY

This paper presents the status of the FAA development of an AMHS to SWIM Gateway to enable international exchange of 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 prototyping 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 Aeronautical Information Exchange Model (AIXM), Flight Information Exchange Model (FIXM), or ICAO Meteorological Information Exchange Model (IWXXM).

2. Discussion

2.1 The AMHS SWIM Gateway prototype will integrate with the FAA's existing ISODE AMHS software.

2.2 The AMHS SWIM Gateway will send and receive Operational Meteorology (OPMET) data formatted using IWXXM utilizing AMHS File Transfer Body Part (FTBP) attachments. This exchange method is an optional enhancement to the basic AMHS X.400 messaging that has been recommended for IWXXM data.

2.3 The AMHS SWIM Gateway prototype will connect to the FAA SWIM in a bi-directional manner.

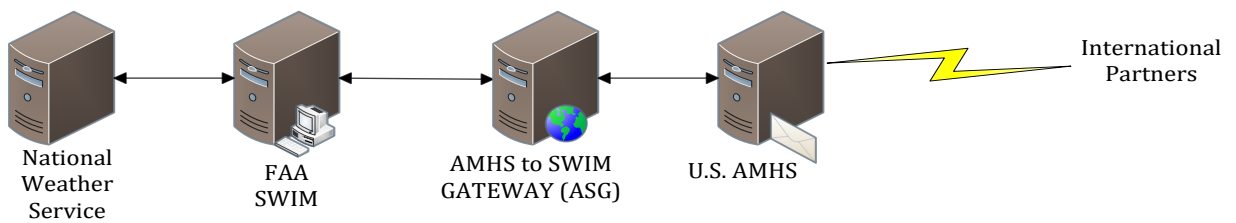
2.4 IWXXM data will be originated by the United States National Weather Service (NWS) and published to the FAA via SWIM. The AMHS SWIM Gateway will consume this data,

Agenda Item 5.2

21 – 23/06/21

generate an AMHS-compliant message that includes the IWXXM data as an FTBP attachment, and distribute the message through AMHS to international partners.

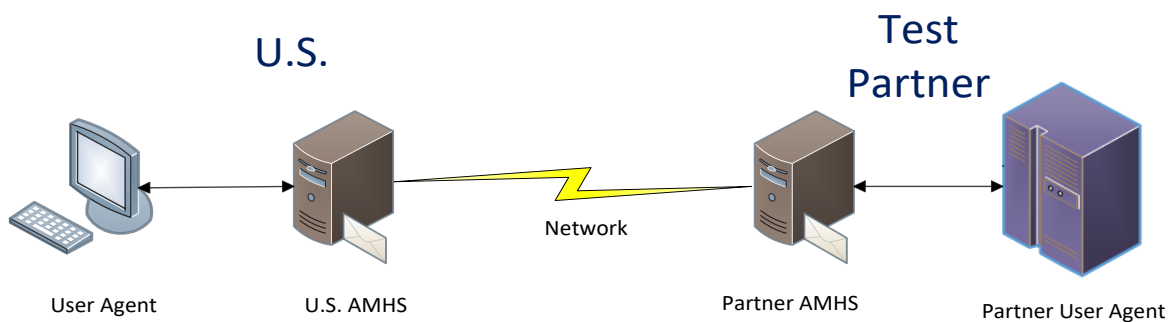
2.5 The AMHS SWIM Gateway will also receive incoming data from the AMHS MTA, extract the IWXXM portion from the FTBP, and publish the data to SWIM. There the data becomes available to SWIM consumers, including the NWS, as pictured here:



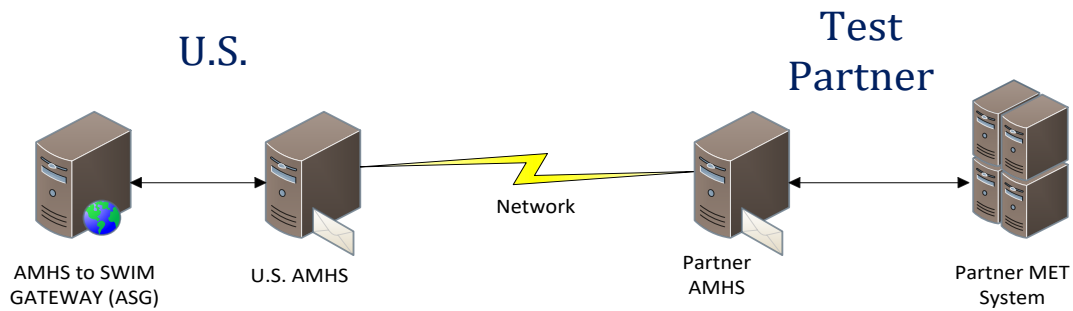
2.6 The FAA’s development of the ASG prototype is generally complete. The U.S. NWS is in the final stages of completing their support of weather products in IWXXM 3.0, after which final testing will be performed.

2.7 Additionally, the FAA has conducted testing with both Cuba and Japan. This testing is being performed in 3 phases, as below:

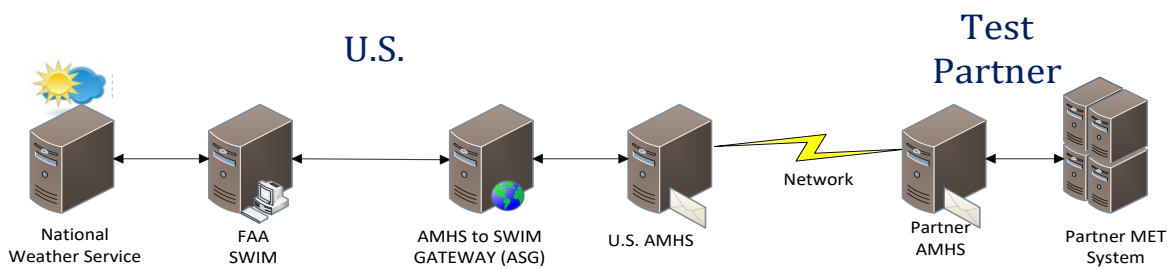
■ Phase 1: FTBP (Cuba and Japan complete)



■ Phase 2: ASG (Cuba and Japan complete)



■ Phase 3: End-to-End (TBD)



2.8 It is anticipated that all development will be complete by the end of July 2021, followed by internal testing and then external test with one or more international partners. Operational implementation is expected in the second half of calendar year 2021.

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
