

OPMET IWXXM DATA DISSEMINATION VIA AMHS TOWARD SWIM

Mexico City, Mexico, 28 to 31 July 2026

Topics

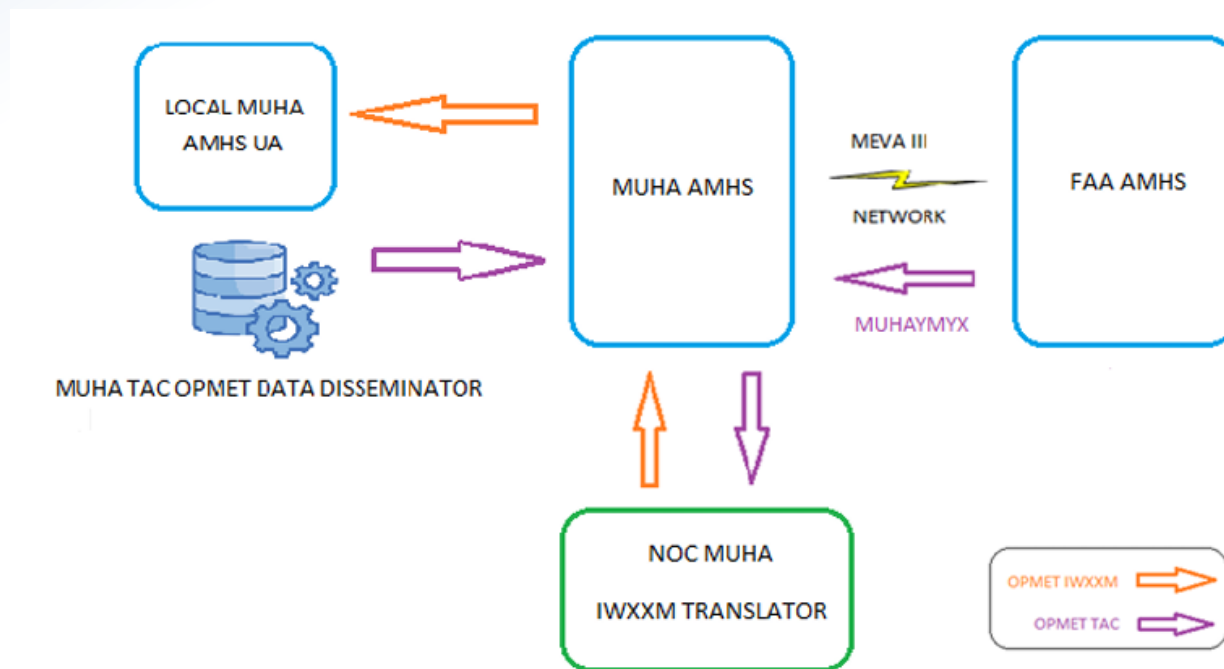
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Introduction

- Disseminating OPMET data in accordance with the ICAO Meteorological Information Exchange Model (IWXXM) to the Regional OPMET Center (ROC) in Washington is a high-priority objective in the CAR Region, in support of the regional strategy for distributing OPMET IWXXM data through the ATS Message Handling System (AMHS) toward System-Wide Information Management (SWIM) environments.
- The COMM and MET Task Forces, through the Ad-Hoc Group composed of Cuba, the United States, Mexico, and the Caribbean Meteorological Organization (CMO), have carried out the initial activities to establish a regional temporary TAC-to-IWXXM translation service.
- This service would provide OPMET IWXXM data on behalf of CAR States and Territories not yet ready to do so, until each has developed its own capacity.

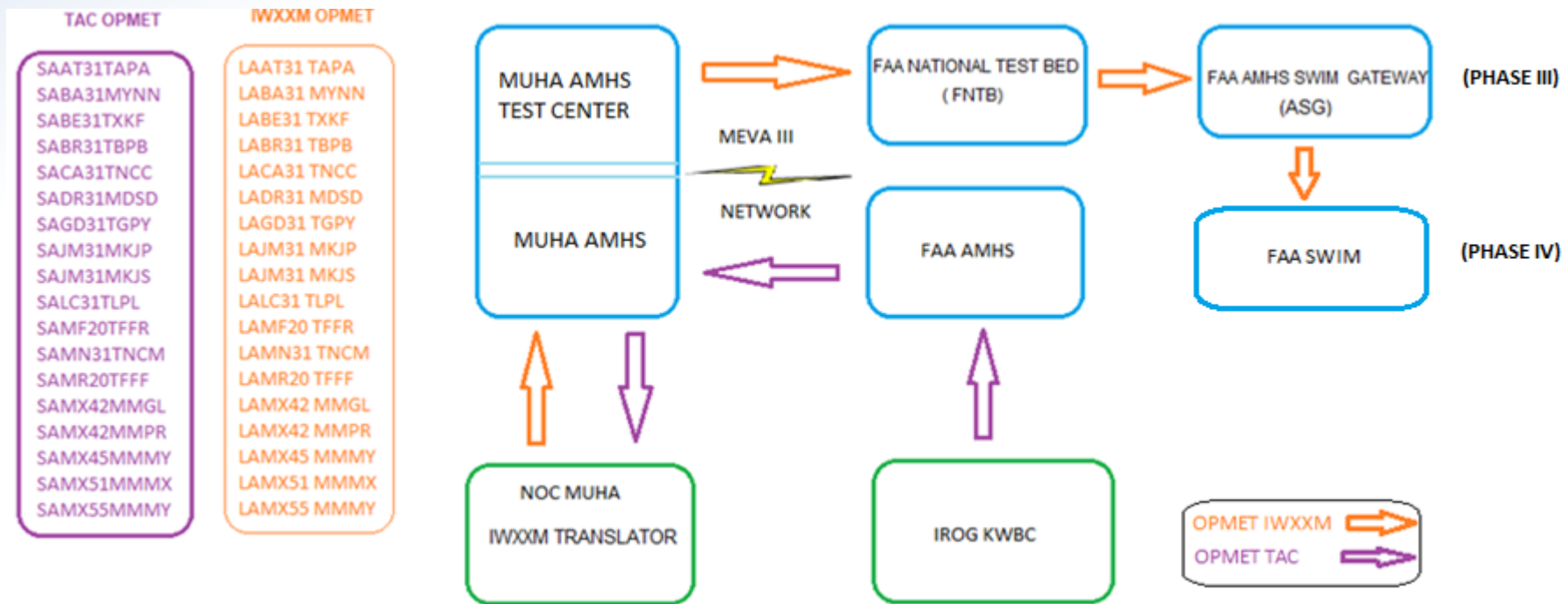
Translation of International OPMET TAC reports

Translation of national and international OPMET TAC reports (METAR, SPECI, TAF, SIGMET) received at the National OPMET Centre of Cuba, and local dissemination of the resulting OPMET IWXXM data to domestic AMHS recipients.



Translation of International OPMET TAC reports

Translation of OPMET TAC reports (METAR) issued by CAR Region meteorological services, and international dissemination of the resulting OPMET IWXXM data to FAA/NWS test environments via AMHS.

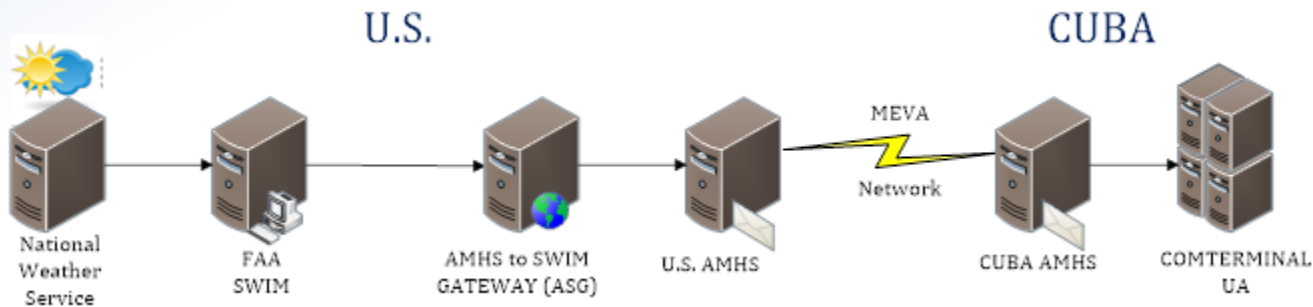


Translation of International OPMET TAC reports

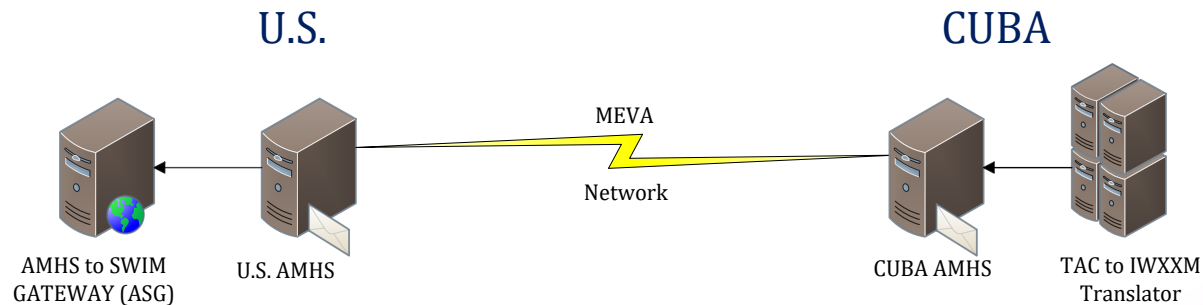
- Translation testing has identified several causes for the process to fail. The most frequent reasons found were:
 - Incorrect coding of cloud layers. E.g., ///CB or ///TCU instead of /////CB or /////TCU.
 - Incorrect temperature group coding when its value is not available. E.g., XX/XX instead of /////.
 - Report on current meteorological phenomena not included in the Technical Regulations, Volume II (WMO No. 49), and published at <http://codes.wmo.int/49-2/AerodromePresentOrForecastWeather>
 - Report on recent meteorological phenomena not included in the Technical Regulations, Volume II (WMO No. 49), and published at <http://codes.wmo.int/49-2/AerodromeRecentWeather>
 - Reports on visibility, RVR, current weather conditions, or cloud cover, along with CAVOK.
 - SIGMETs reporting Phenomenon not included in the Technical Regulations, Volume II (WMO-No. 49), Part II, Appendix 6, <http://codes.wmo.int/49-2/SigWxPhenomena> E.g. OCNL TS.
 - Incorrect codification of the observed or forecast Phenomenon Time in SIGMET reports.
- In the event of TAC-to-IWXXM translation failure, the corresponding IWXXM message (METAR, TAF, SIGMET) should contain the original TAC text and be disseminated to users for manual interpretation. [1]
- International translation requires measures to mitigate and prevent TAC OPMET data processing errors. [1]

Interoperability Test Configuration for the exchange of IWXXM data over AMHS between the United States and Cuba. (Phase III)

XML Files from the U.S. to Cuba



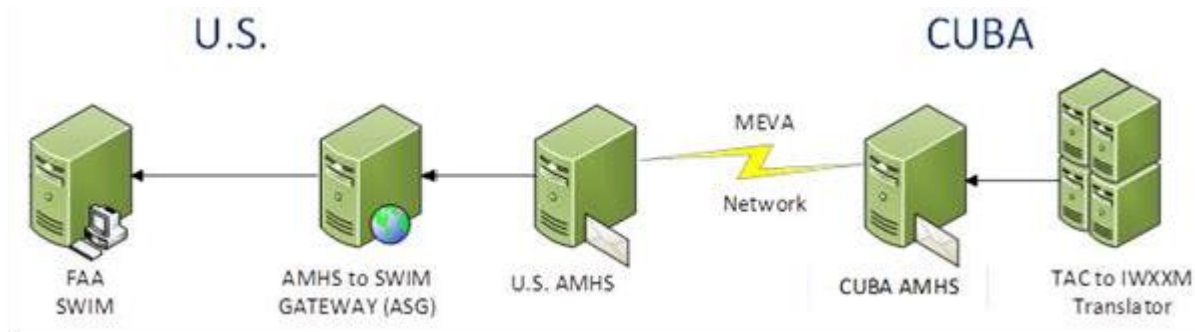
XML Files from Cuba to the U.S.



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Interoperability Test Configuration for the exchange of IWXXM data over AMHS between the United States and Cuba. (Phase IV)

XML Files from Cuba to the U.S.



Conclusions

- The results obtained during the tests conducted by Cuba, the FAA, and the U.S. NWS represent the first advances of the Ad-Hoc Group toward the conception of a regional project for the implementation of a temporary TAC-to-IWXXM OPMET data translation service.
- Next steps should consider expanding OPMET TAC translation testing of Phase IV to include international TAF and SIGMET reports.
- Once the OPMET IWXXM data translation and dissemination testing have been successfully concluded, Cuba should begin disseminating MU OPMET IWXXM data to the Washington Regional OPMET Data Bank (RODB). At that point, the MUHA NOC stands ready to provide translation services for other Caribbean States, upon establishment of bilateral letters of agreement and with ICAO support [1] .

References

- [1] Guidelines for the Implementation of OPMET Data Exchange using IWXXM. Fifth Edition – October 2023. [Online]. Available: [GUIDELINES FOR THE IMPLEMENTATION OF OPMET DATA EXCHANGE USING IWXXM](#)