



**Agenda Item 3: Report of activities and deliverables of the INTEROP TF and Subgroups
b) CNS Implementation. Progress of the Subgroups.**

**ACTIVITIES CARRIED OUT BY BRAZIL TO ADAPT
THE OPMET REGIONAL DATA BANK (RODB) IWXXM**

(Presented by Brazil)

Summary	
This information paper note presents the activities undertaken by Brazil to facilitate the use of the new features of the Regional OPMET Data Bank of Brasilia.	
References	
<ul style="list-style-type: none">- AMD 77 al Anexo 3 de la OACI;- AMD 78 al Anexo 3 de la OACI;- AMD 79 al Anexo 3 de la OACI.	
ICAO's Strategic Objectives:	<i>A – Safety</i> <i>B – Air Navigation Capacity and Efficiency</i> <i>ASBU: AMET-B0/4 (IWXXM) and COMI-B0/7 (AMHS)</i>

1. INTRODUCTION

1.1 The main function of the OPMET Data Bank is to automatically receive, select, store and send weather information to predetermined recipients, in order to ensure safer flight plans.

1.2 The system has an architecture based on an integrated platform, which includes a high-availability hardware infrastructure and a dedicated software application, which allows Air Navigation Service Providers (PSNA) to have quality and highly available weather information.

1.3 The exchange of OPMET information, in digital format, is part of the performance improvement area of global interoperability of data and systems of the Aviation System Block Upgrades (ASBU) program and is in line with the System Wide Information Management (SWIM) concept.

2. DISCUSSION

2.1 The fact is that the IWXXM protocol has been evolving and therefore ICAO makes new versions available, as shown in the following table:

IWXXM	METAR/SPECI	TAF	SIGMET	AIRMET	TCA	VAA	SWA	SIGWX	Annex 3 Amd.
1.1	1.1.0	1.1.0	1.1.0	-	-	-	-	-	Amd 76
2.1	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1	-	-	Amd 77
3.0	3.0.0	3.0.0	3.0.0	3.0.0	3.0.0	3.0.0	3.0.0	-	Amd 78
2021-2	3.1.0	3.0.1	4.0.0	3.1.0	3.1.0	3.1.0	3.0.1	1.0.0	Amd 79 + Amd 80
2023-1RC1 (Submission for WMO FT approval)	3.1.0	3.0.1	4.0.1RC1	3.1.1RC1	3.1.0	3.1.0	3.0.1	1.1.0 RC1	Amd 79 + Amd 80

2.2 Taking into account the ICAO IWXXM protocols, it is possible to see great benefits generated by the IWXXM format, such as reducing the size of files transported on the network and facilitating their understanding by users.

2.3 In response to these demands, in 2020 the Department of Airspace Control (DECEA) of Brazil modernized the System, in compliance with amendments 77 and 78 of ICAO A3, on the exchange of OPMET meteorological information using a standardized digital exchange format (XML), called IWXXM-ICAO (Meteorological Information Exchange Model).

2.4 In this modernization, versions 1.1 and 2.1 of the IWXXM were implemented and approved at the time and in 2021 version 3.0 of the IWXXM was also implemented.

2.5 The Regional OPMET Data Bank of Brasilia (RODB) version 3.0 exchanges meteorological messages via AMHS and has a service interface via INTERNET, as shown in Figure 1.

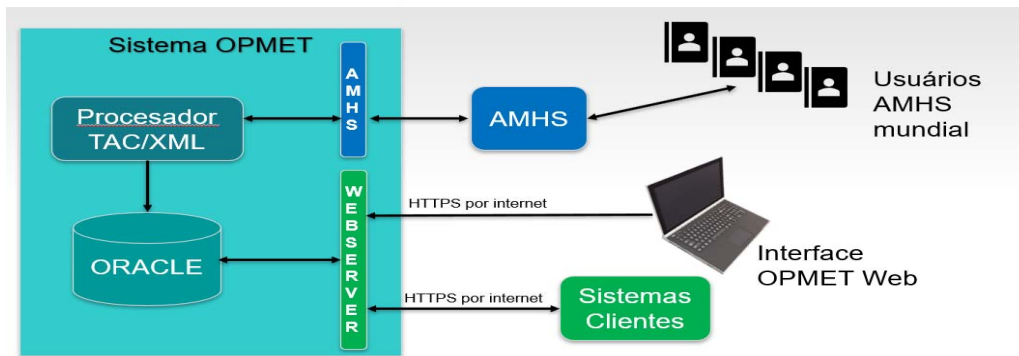


Figure 1 – Architecture of Brasilia RODB

2.6 The system allows to share meteorological information with simplicity and security, in digital format (XML), according to the new System Wide Information Management (SWIM) concept proposed by ICAO, which aims to provide a global environment of interoperability of data and information related to the flight, thus contributing to more efficient and less expensive air operations, without affecting the levels of operational safety.

2.7 The solution also offers a number of advanced features and reports, which can be accessed remotely via web services, ensuring quick access to weather information for everyone involved in air operations.

2.8 The evolution caused by the advent of the new OPMET is associated with the use of the internet, which allows the reception and sending of meteorological messages. It should be noted that, even with the use of the Internet, the system still maintains regular message processing through the ATS Message Handling System (AMHS), allowing access to weather messages through more than one channel.

2.9 The most recent version of the IWXXM protocol, approved by ICAO, is version 2021-2, which includes amendments 79 and 80 of ICAO Annex 3, of which the following stand out:

- a) inclusion of two new message types (WAFS SIGWX and Meteorological Feature); and
- b) adaptations of the existing basic types in version IWXXM 3.0 (METAR, SPECI, TAF, SIGMET, AIRMET, SWX, VAA and TCA).

2.10 In this sense, the OPMET database must be suitable so that it can receive, process, validate and store new messages (WAFSSigwx and Meteorological Feature), in addition to re-evaluating the validations of the basic types (METAR, SPECI, TAF, SIGMET, AIRMET, SWX, VAA and TCA).

2.11 Thus, DECEA is working on planning to carry out a new update of the OPMET Bank, with the aim of complying with the 2021-2 version, still in 2024.

2.12 As for version 2023-1, DECEA is still waiting for the approval process of this version by ICAO to be finalized, to take the necessary actions.

2.13 Finally, Brazil remains available for testing the exchange of messages in IWXXM format via AMHS, as well as tests via webservice.

3. CONCLUSION

3.1 The Meeting is invited to:

- a) take note of the information provided; and
- b) analyze other considerations that the Workshop/Meeting deems pertinent.

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