Workshop on the Implementation of the ICAO Meteorological Information Exchange Model (IWXXM) in the AFI Region

Managing the Transition to IWXXM Format

Goama Ilboudo, Regional Officer, MET, WACAF Office

Outlines

- Introduction
- Managing the transition to IWXXM
- Requirements ad Procedures for implementing the IWXXM in the Region
- Coordination and Monitoring of the Transition
- Overview on the IWXXM Survey
- Actions to coordinate and manage the transition to IWXXM.

Introduction

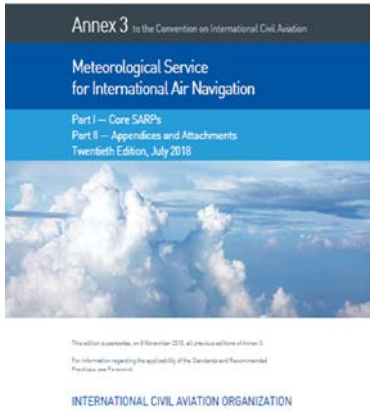
- The exchange of meteorological information in IWXXM format became a Recommended Practice in Amendment 77 to ICAO Annex 3, with applicability of November 2016. Some States began exchanging digital products in IWXXM from early 2017. The exchange of meteorological information in IWXXM format became a Standard in November 2020, as indicated in Amendment 78 to ICAO Annex 3 and in accordance with the applicability of Amendment 79 to ICAO Annex 3.
- The exchange of OPMET data in IWXXM format will be based on the ATS Message Handling System (AMHS) Extended Service with FTBP functionality for the transport of attached files.
- The Conclusion 23/20 of APIRG/23 Meeting calls for:
  - a) the Secretariat, with the support of the APIRG IIM MET 1 Project coordinators and members, to take appropriate measures and arrangements to ensure that the AFI IWXXM implementation guidance document is finalised and made available to States no later than 15 January 2021;
  - b) States be invited to expedite the development of IWXXM capabilities for exchange of OPMET data in digital format to meet the implementation date in accordance with ICAO Annex 3;
  - c) States that have developed capabilities for exchange of OPMET data in digital format are encouraged to enter into bilateral/multilateral agreements for testing of their systems; and
  - d) COM Project 2, consider the provision of the AFI AMHS Manual and integrate an appendix focusing on the AMHS Profile for OPMET

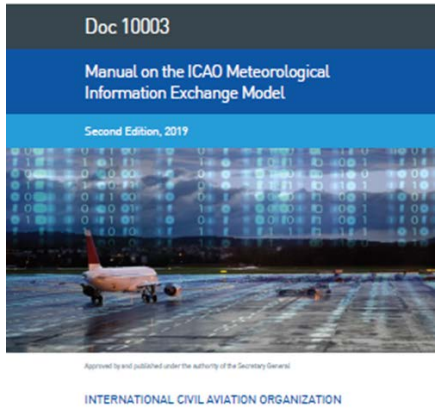
Managing the Transition to IWXMM

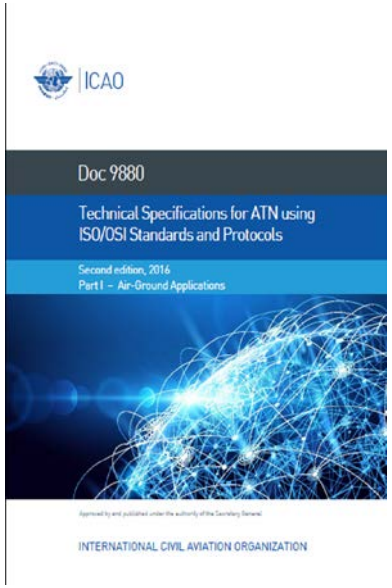
- The METP WG-MIE has developed **generic Guidelines** document to assist all ICAO Regions with the transition to IWXXM exchange.
- **ICAO AFI Region** established a **regional version of the document to provide regional information and references**, maintaining alignment to the global guidelines to ensure the inter-regional exchange is not affected. That version is available online at https://www.icao.int/WACAF/Pages/electronic-documents.aspx
- **A group responsible for managing the transition** should be identified in each ICAO Region, for the necessary intra- and inter-regional coordination, and should be guided by Meteorological Panel (METP) Working Group on Meteorological Information Exchange (WG-MIE) with the support of WMO.
- Note: Group(s) such as the APIRG IIMSG MET Project 1, Data Management Group for EUR, the Bulletin Management Group for MID and the Meteorological Information Exchange Working Group (MET/IE) for APAC could be the right groups to manage this transition (or equivalent groups in other Regions).
- Where AMHS is being used**, close cooperation with the State COM** (Communications) Centre is advised to assure an efficient management of AMHS links and interconnections between adjacent Regions.

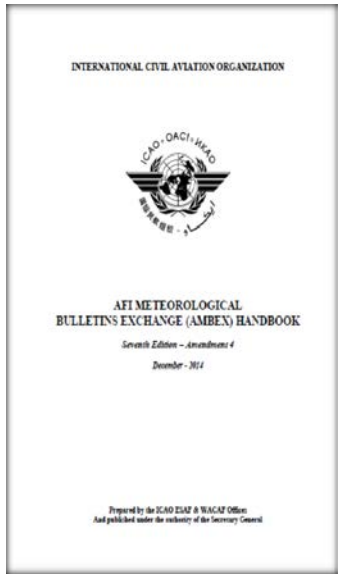
Procedures for implementing IWXXM

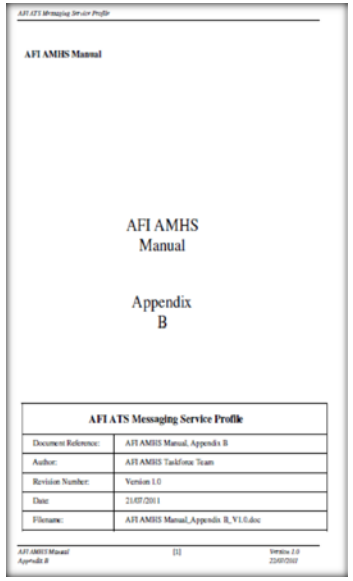
IWXXM implementation Documentation











Coordination and monitoring the transition

- Regional group(s) should be designated to deal with the transition in order to further define and monitor:

  a) **Intra-regional plans** on AMHS infrastructure/links and IWXXM data exchange between the ROCs, and between the ROCs and RODBs.

  b) **Intra-regional implementation plans** on IWXXM data exchange by the States to their ROC.

  c) **Agreement** to define how the testing platform and software should be made available and accessible to each State.

  d) It is desirable that responsible group(s) for managing the transition in each ICAO Region be identified and established, that could be responsible for defining the Regions structure and capabilities in the context of the framework.

- The inter-regional procedures to support notification of changes to AMHS infrastructure/links between IROGs and changes to IWXXM bulletins.

- The Contingency plans for the IROGs should include the exchange IWXXM data.

- Cyber Security : Appropriate AFS security elements should be defined by the ICAO groups in charge of information management / networks in order to introduce the operational exchange of IWXXM data via extended AMHS.

AFI Regional Group(s)

- APIRG IIM MET Project 1 - *Implementation of information concerning en-route weather phenomena which may affect the safety of aircraft operations (SIGMET), Quality Management System for aeronautical meteorology (QMS/MET) service, in the AFI region*
- APIRG IIM MET Project 2 - *Implementation of Terminal Area Warnings and Forecasts, Provision of WAFS Forecasts and Optimization of OPMET data exchanges in the AFI Region*
- APIRG IIM COM Project 2 - *GROUND/GROUND COMMUNICATION : Implementation of Ground/ground communication aimed at ensuring operational traffic data flow and Information management (FPLs, OPMETS, NOTAM)*
- APIRG IIM COM Project 5 - *Assessment of AFI Aeronautical Networks Cyber Security*
- IROG/RODBs Dakar and Pretoria
- ROC Toulouse
- BCCs States

Coordination and monitoring the transition

Overview on the IWXXM Survey outcome

ESAF /WACAF States	Questions /Answers - Extracted from the IWXXM Survey 2021							Comments
	#1 - AFS COM-Centre implemented or plans to implement the Extended ATSMHS that includes File Transfer Body Part (FTBP)	**#2** - BCC Sates to establish an AMHS connection with the FTBP module between your AFS COM-Centre and AFS COM-Centre of associated ROC LFPW	**#4** - BCC has developed capability to act as a Translation Centre for OPMET data from TAC to IWXXM and vice versa	**#5** - Translation Agreement between your BCC (acting as Translation Centre) and applicant State /NOC in place	**#7** - Operational tests conducted between your BCC and the corresponding ROC where AMHS with FTBP module is already in place	**#10** - Does your RODBs have the capabilities to handle OPMET data in both IWXXM and TAC format?	#17 - Is there an **inter-regional plan** on AMHS infrastructure/links and IWXXM data exchange between the ROC of Toulouse and your RODB (Dakar and Pretoria)?	
Burundi	No	Yes	No	Yes	No	No	No	
Comoros	Yes	-	-	No	-	Yes	-	
Madagascar	Yes	-	No	Yes	No	Yes	-	RODB DKR to translate
Namibia	Yes	Yes	Yes	No	Yes	Yes	Yes	
Rwanda	Yes	Yes	Yes	No	No	-	Yes	
South Africa	Yes	Yes	Yes	No	No	Yes	No	
Benin	Yes	-	No	Yes	No	Yes	Yes	BCC of DKR to translate
Burkina Faso	Yes	-	No	Yes	No	Yes	Yes	BCC of DKR to translate
Cameroon	Yes	-	No	Yes	-			AMHS with FTBP to be operational in April 2022 BCC of DKR to translate
Central African Republic	Yes	-	-	Yes	-	Yes	-	
Chad	Yes	No	No	Yes	No	Yes	Yes	BCC of DKR to translate #17 Yes via DKR
Congo	Yes	Yes	No	No	No	Yes	Yes	#4 Scheduled for April 2022
Cote d'Ivoire	Yes	-	-	No	-	Yes	-	Scheduled for April 2022
Equatorial Guinea	Yes	-	-	No	-	Yes	-	
Gabon	Yes	-	-	No	-	Yes	-	
Guinea Bissau	Yes	-	-	No	-	Yes	-	
Mali	Yes	No	No	Yes	-	Yes		BCC of DKR to translate
Mauritania	Yes	No	No	Yes	No	Yes		BCC of DKR to translate
Niger	Yes	No	No	Yes	No	Yes		BCC of DKR to translate #7 scheduled fo April 2022
Senegal	Yes	Yes	No	Yes	No	Yes	Yes	#4 External Translation Centre
Togo	Yes	No	No	Yes	-	Yes	Yes	BCC DKR to translate #17 Yes via DKR

Actions by the Group(s)

- **Coordinate** the transition to IWXXM in tha AFI Region.
- **Define and monotor the Intra-regional plans** on AMHS infrastructure/links and IWXXM data exchange between the ROCs, and between the ROCs and RODBs.
- **Define and monotor Intra-regional implementation plans** on IWXXM data exchange by the States to their ROC.
- Ensure the establishment of **an Agreement to define how the testing platform** and software should be made available and accessible to each State.
- **Report to ESAF and WACAF Offices** on the implementation of the IWXXM in the FAI Region

Actions by the Workshop

- Review and consider the proposed AFI region Group(s) for managing the IWXMM
- Agree on a Lead of the group(s)
- Request the group(s) to report on the implementation of agreed actions as per actions by the group's) and provide related actions plans.

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THANK YOU