Second Meeting of the North American, Central American and Caribbean Working Group (NACC/WG) Aeronautical Meteorology (MET) Task Force (TF) (MET/TF/02)
Mexico City, Mexico, 27 February to 1 March 2024

Agenda Item 7:   **Other Business**

AVAILABILITY AND EXCHANGE OF IWXXM

(Presented by United Kingdom)

EXECUTIVE SUMMARY
METP WG-MIE Interregional Coordination on IWXXM Information Exchange.

Strategic Objectives:	- Safety - Air Navigation Capacity and Efficiency - Environmental Protection

1.   **Introduction**

1.1   The ICAO METP Working Group on Meteorological Information Exchange (METP WG-MIE) is working collaboratively to ensure the smooth transition to the provision and exchange of MET information in digital format (IWXXM) and into the System Wide Information Management System (SWIM) environment.

1.2   2 of the MIE Activities have been created to increase the exchange of IWXXM.

1.3   METP WG MIE Activity 1.2 Interregional Coordination on IWXXM information Exchange.

Activity 1.2: Interregional Coordination on IWXXM Information Exchange
a)   Identify regions with inconsistencies in terminology adopted for OPMET.
b)   Request that the ICAO Secretariat:
  i.   Assist with coordination among ICAO PIRGs in further promoting the implementation of inter-regional IWXXM information exchange.
  ii.   Where relevant, inform PIRGs of the need to adopt OPMET exchange changes via the METNO process.

Within IWXXM Guidelines, define the roles for addressing IWXXM information.

1.4   METP WG MIE Activity 1.3 Increasing Availability of IWXXM Data

Activity 1.3: Increasing Availability of IWXXM Data

Develop an ad hoc group, with IATA engagement, to increase the global availability and exchange of IWXXM data.

1.5   The full list of current MIE activities can be seen on the ICAO Meteorology panel (METP) secure site. And selecting WG-MIE.

2.   Availability of IWXXM in EUR Region and SADIS

2.1   IWXXM became an ICAO standard in November 2020. Currently there is very little inter regional exchange of IWXXM.

2.2   There is currently no data IWXXM being received from the AFI, NACC or SAM regions to the EUR Region and on SADIS.

2.3   There is a large difference between the number of Global TAC messages and IWXXM messages available in the EUR Region and on SADIS.

3762 different TAC Messages - 934 different IWXXM Messages.

2.4   The IWXXM availability in the EUR Region and on SADIS is:

	LA	LP	LS	LT	LC	LK	LU	LV	LW	LY	LN
APAC	METARS 26	SPECI 17	SIGMET 17	Long TAF 20		TC Advisory 3	VA Advisory 5	VA SIGMET 9	AIRMET 2	TC SIGMET 8	SWX Advisory 8
EUR	METARS 184	SPECI 57	SIGMET 110	Long TAF 149	Short TAF 89	TC Advisory 2	VA Advisory 8	VA SIGMET 103	AIRMET 48	TC SIGMET 6	SWX Advisory 16
MID	METARS 28	SPECI 4	SIGMET 10	Long TAF 5							

3.   Naming Conventions

It is important to understand not all ICAO regions manage the regional data in the same way. For the purpose of this paper and future communications the following terms should be understood.

3.1   NOC - National OPMET Centre

A NOC is the Service which manages the national exchange of ICAO meteorological OPMET data within a state. NOCs should collect all OPMET messages generated by the State's originating stations, compile national bulletins, and make them available over the AFS.

3.2   ROC - Regional OPMET Centre

A ROC is the Service which manages the regional exchange of ICAO meteorological OPMET data. Associated with AFS relay COM-centres capable of handling efficiently the volume of traffic anticipated.

3.3   IROG - Inter Regional OPMET Gateway

An IROG is the Service which manages the inter-regional exchange of ICAO meteorological OPMET data with specific ICAO regions. Disseminating and making available the received data within its region.

3.4   RODB - Regional OPMET Data Bank

An RODB is the service which provides the storage in a database of OPMET data, for aeronautical users holding a valid AFTN or AMHS address.

4.   IROG SERVICES

4.1   To better understand the inter-regional exchange of OPMET data, I have investigated which regional locations provided IROG duties. Combining this knowledge with the available AFS networks (section 5) will help in the understanding of what work is still required and which areas will benefit from further assistance.

4.2   This has been created with what is currently understood. If there are any required amendments to this section, please inform the author of this paper - matt.wagner@nats.co.uk.

4.3   Exchange partners.

4.3.1   AFI

- AFI - APAC   IROG Dakar   - IROG Bangkok and IROG Brisbane
                           IROG Pretoria   - IROG Bangkok and IROG Brisbane
- AFI - EUR/NAT   IROG Dakar   - IROG Toulouse
                               IROG Pretoria   - IROG Toulouse
- AFI – MID   No information provided at this time.
- AFI – NACC   IROG Dakar   - IROG Washington (Via IROG Toulouse)
                             IROG Pretoria   - IROG Washington (Via IROG Toulouse)
- AFI – SAM   no information provided at this time.

4.3.2   APAC

- APAC – AFI   IROG Bangkok   - IROG Dakar and IROG Pretoria
                              IROG Brisbane   - IROG Dakar and IROG Pretoria
- APAC - EUR/NAT   IROG Singapore   - IROG London
                                   Sri Lanka   - IROG London (no METARs)
                                   India   - IROG London (SIGMET only
                                   Hong Kong   - IROG London (TAF only
                                   Nepal   - IROG London
                                   Thailand   - IROG London (SIGMET only
                                   Vietnam   - IROG London (SIGMET only

		Myanmar	- IROG London (SIGMET only
		Indonesia	- IROG London (no TAF
		Malaysia	- IROG London (SIGMETs
		Australia	- IROG London (SIGMETs
•	APAC – MID	IROG Bangkok	- IROG Jeddah and IROG Bahrain
•	APAC – NACC	IROG Nadi	- IROG Washington
		IROG Tokyo	- IROG Washington
•	APAC – SAM	IROG Brisbane	- IROG Brasilia

4.3.3 EUR/NAT

•	EUR/NAT – AFI	IROG Toulouse	- IROG Dakar & IROG Pretoria
•	EUR/NAT – APAC	IROG London	- IROG Singapore
•	EUR/NAT – MID	IROG Vienna	- IROG or IROG Jeddah
•	EUR/NAT – NACC	IROG London	- IROG Washington
•	EUR/NAT – SAM	IROG London	- IROG Brasilia

4.3.4 MID

•	MID – AFI	IROG Jeddah	- IROG Pretoria
•	MID – APAC	IROG Bahrain	- IROG Bangkok
		IROG Jeddah	- IROG Bangkok
•	MID - EUR/NAT	IROG Jeddah	- IROG Vienna
•	MID – NACC	MID use SADIS for NACC data	
•	MID – SAM	MID use SADIS for SAM data	

4.3.5 NACC

•	NACC – AFI	IROG Washington	- IROG Dakar (Via IROG Toulouse)
		IROG Washington	- IROG Pretoria (Via IROG Toulouse)
•	NACC – APAC	IROG Washington	- IROG Nadi
		IROG Washington	- IROG Tokyo
•	NACC – EUR/NAT	IROG Washington	- IROG London
		Canada	- IROG London
		Turks and Caicos	- IROG London (METAR MBPV
		Dominican Republic	- IROG London (METARs
		Honduras	- IROG London
		Jamaica	- IROG London METARs
		Mexico	- IROG London
		Nicaragua	- IROG London
		Panama	- IROG London
		Costa Rica	- IROG London
		El Salvador	- IROG London
		Cuba	- IROG London
		Cayman Islands	- IRPG London
		Belize	- IROG London

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French Antilles   - IROG London
Trinidad & Tobago   - IROG London

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- NACC – MID   No information provided at this time.
- NACC – SAM   IROG Washington   - IROG Brasilia

4.3.6   SAM (and some Caribbean States)

- SAM – AFI   No information provided at this time.
- SAM – APAC   IROG Brasilia   - IROG Brisbane
- SAM – EUR/NAT   IROG Brasilia   - IROG London
  - Argentina   - IROG London
  - Chile   - IROG London
  - Ecuador   - IROG London
  - Paraguay   - IROG London
  - Colombia   - IROG London
  - Suriname   - IROG London
  - French Guiana   - IROG London
  - Peru   - IROG London
  - Uruguay   - IROG London (no METARs, SUMU from Brasilia
  - Venezuela   - IROG London
  - Guyana   - IROG London
- SAM – MID   No information provided at this time.
- SAM – NACC   IROG Brasilia   - IROG Washington

5   MESSAGING NETWORKS

5.1   For the exchange of ICAO Met data there are 3 main 'protocols' the data is exchanged over. AFTN (Aeronautical Fixed Telecommunication Network), CIDIN (Common ICAO Data Interchange Network) and AMHS (Air Traffic Services Message Handling System).

5.2   ICAO MET data is exchanged over Networks managed by National and regional COMM Centres, Section 5.3 demonstrates what inter-regional exchange paths are currently available to exchange MET data over.

5.3   International Messaging Networks – December 2023 AMC Charts

Black – Reported as an AMHS network (IWXXM can be exchanged)
Green – Presently no reported as an AMHS network.

5.3.1   AFI

- AFI - APAC   HKNA - VABB
          FAOR   -   YBBB
- AFI - EUR/NAT   GOOO - GMMM-   LEEE
          GOOO - GMMM-   LPPT
          GOOO - LEEE
          FAOR - LEEE

- AFI – MID   HAAB

DRRR	-	DAAA
HAAB	-	HSSS
HAAB	-	OEJN
HKNA	-	HECA

- AFI – NACC   No direct routing
- AFI – SAM   GOOO - SBBR

5.3.2   APAC

- APAC – AFI

VAAB	-	HKNA
YBBB	-	FADR

- APAC - EUR/NAT

WSSS	-	EGGG
RJJJ	-	UUUU
ZBBB	-	UHHH
ZMUB	-	UIII
VTBB	-	LIII

- APAC – MID   VABB - OOMS
- APAC – NACC

YBBB	-	KSLC
NZCH	-	KSLC
NFFN	-	KSLC

- APAC – SAM   No direct routing

5.3.3   EUR/NAT

- EUR/NAT – AFI

LPPT	-	GMMM-	GOOO
LEEE	-	GMMM-	GOOO
LEEE	-	GOOO	
LEEE	-	FADR	
LFLF	-	DAAA	- DRRR

- EUR/NAT – APAC

EGGG	-	WSSS
UUUU	-	RJJJ
UHHH	-	ZBBB
UIII	-	ZMUB
LIII	-	VTBB

- EUR/NAT – MID

LIII	-	DTTC	- HECA
LGGG	-	HECA	
LCNC	-	HECA	
LCNC	-	OEJN	
LCNC	-	OJAM	
LCNC	-	OLBA	
LCNC	-	OBBI	

- EUR/NAT – NACC EGGG - KATL

EGGG	-	CYAA
BICC	-	CYAA
LPPT	-	KATL
LPPT	-	CYAA

- EUR/NAT – SAM   LEEE - SVCA

LEEE	-	SAEZ		
LEEE	-	SBBR		

5.3.4 MID

- MID – AFI HSSS - HAAB

  OEJN - HAAB

  HECA - HKNA
- MID – APAC OOMS - VABB
- MID - EUR/NAT HECA - DTTC - LIII

  HECA - LGGG

  HECA - LCNC

  OEJN - LCNCV

  OJAM - LCNC

  OBBI - LCNC

  OLBA - LCNC
- MID – NACC No direct routing
- MID – SAM No direct routing

5.3.5 NACC

- NACC – AFI No direct routing
- NACC – APAC KSLC - NFFN

  KSLC - NZCH

  KSLC - RJJJ

  KSLC - YBBB
- NACC – EUR/NAT KATL - EGGG

  KATL - LPPT

  CYAA - EGGG

  CYAA - BICC

  CYAA - LPPT
- NACC – SAM KATL - SBBR

  KATL - SVCA

  KATL - SPIM

  KATL - MPPC - SKBO

  MHTG - SKBO

  MHTG - SPIM

  MHTG - MPPC

  MHTG - SVCA

5.3.6 SAM (and some Caribbean States)

- SAM – AFI SBBR - GOOO
- SAM – APAC No direct routing
- SAM – EUR/NAT SBBR - LEEE

  SAEZ - LEEE

  SVGA - LEEE

- SAM – MID   No direct routing
- SAM – NACC   SKBO -   MPPC   -   KATL

                                      SBBR -   KATL

                                      SPIM -   KATL

                                      SVGA -   KATL

                                      SVGA -   TNCC

                                      SVGA -   TTPP   -   KATL

                                      SYCJ -   TTPP   -   KATL

6   WG-MIE challenges

6.1   The WG-MIE is working collaboratively to ensure the smooth transition to the provision and exchange of MET information in digital format (IWXXM) and into the System Wide Information Management System (SWIM) environment.

6.2   To be able to transition into a full SWIM environment there are several steps which need to be fulfilled first. Global exchange of IWXXM is an important step to SWIM and as shown there is very little exchange at the moment.

6.3   Regional support and members working on MIE activities is very limited to a small number of individuals. The MIE welcomes new members who want to participate in its activities.

7   Next steps for more and better global IWXXM exchange

7.1   The EUR region and SADIS is ready to receive global IWXXM data.

7.2   There are processes to follow to manage the exchange of new data to ensure the IWXXM is valid and useable. These will be notified when new data is ready to be exchanged. And for those locations who want to receive IWXXM the EUR region is capable of providing the required IWXXM data if Networks allow.

7.3   For those States who want to exchange with the EUR Region please contact Matt.wagner@nats.co.uk.

7.4   For the states who are currently not able to exchange IWXXM data. Could you please provide the MIE a timeline of when this is likely to be possible. This will help in provide support and evidence for some of the ongoing Activities the group is working on for the global community. Please inform Matt.wagner@nats.co.uk.

— END —