



ICAO

*International Civil Aviation Organization***Tenth Meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/10)***Bangkok, Thailand, 24 - 26 May 2023*

Agenda Item 2: Review of outcomes of relevant meetings

OUTCOMES OF MET/IE WG/21

(Presented by the Secretariat and Chair of MET/IE WG)

SUMMARY

This paper presents relevant outcomes from the MET/IE WG/21 to support global IWXXM exchange and invites the ACSICG meeting to consider proposals for the expedited implementation of AMHS (with FTBP and IHE) intra- and inter-regionally, and a possible conjoint meeting session to be conducted by the MET/IE WG and ACSICG in 2024.

Note: supporting discussion and a related proposal are presented under Agenda Item 8 in WP/10.

1. INTRODUCTION

1.1. Outcomes of the Twenty-first Meeting of the Meteorological Information Exchange Working Group (MET/IE WG/21) included proposals to support the required global dissemination of meteorological information in the ICAO Meteorological Information Exchange Model (IWXXM) form for further consideration by the ACSICG.

1.2. The relevant MET/IE WG/21 outcomes for consideration by the ACSICG included, among other things, a proposal for the implementation of the intra- and inter-region network circuits for IWXXM exchange, including support for the Air Traffic Services Message Handling System (AMHS) with File Transfer Body Part (FTBP) and Interpersonal Message Heading Extension (IHE), to be prioritised by the ACSICG. Further discussion supporting the above proposal is presented under Agenda Item 8 in WP/10.

1.3. In addition, the MET/IE WG/21 proposed the possibility of conducting a conjoint meeting session of the MET/IE WG with the ACSICG in 2024.

2. DISCUSSION

2.1. ICAO hosted MET/IE WG/21 at the APAC Office in Bangkok, Thailand, from 27 to 29 March 2023 (<https://www.icao.int/APAC/Meetings/Pages/2023-MET-IE-WG21.aspx>).

2.2. MET/IE WG/21 reviewed progress and considered new proposals contributing to the Meteorology Sub-Group (MET SG) and APAC Air Navigation Planning and Implementation Regional Group (APANPIRG) work plan to improve the availability, reliability and compliance of meteorological information for international air navigation in the APAC Region.

2.3. As part of its work supporting the availability of meteorological information in IWXXM form, MET/IE WG/21 discussed the development of the Online Register of APAC IWXXM Exchange Status, which was accessible via a link published¹ in the ICAO APAC Regional OPMET Bulletin Exchange (ROBEX) Handbook and in which States indicated the capabilities of the designated APAC Regional OPMET Centres (ROCs) and National OPMET Centres (NOCs) to receive and disseminate IWXXM messages regularly. A copy of the Online Register is provided in the **Attachment** to this paper.

2.4. However, MET/IE WG/21 noted that only eight (8) APAC ROCs had registered their capability to receive and disseminate IWXXM messages regularly. Furthermore, some ROCs and NOCs were still unprepared to receive IWXXM messages via the necessary AMHS circuits. While some States indicated the capability to generate meteorological information in the IWXXM form, they could not disseminate the IWXXM messages from the NOCs to the ROCs because the necessary AMHS with FTBP and IHE was not implemented.

2.5. MET/IE WG/21 also noted that in addition to registering the IWXXM exchange capabilities of the Regional Centres, a new table was added to the Online Register to indicate the capabilities of the designated APAC Inter-Regional OPMET Gateways (IROGs) to regularly receive and disseminate meteorological information in IWXXM form, inter-regionally with the other ICAO regions.

2.6. However, MET/IE WG/21 noted that only one (1) of the designated APAC IROGs (i.e., Singapore) had registered its capability to regularly exchange meteorological information in IWXXM form, inter-regionally with an IROG in another ICAO region (i.e., London, EUR region).

2.7. Therefore, to facilitate additional information on the regular exchange of meteorological information in IWXXM form between APAC and all ICAO regions, MET/IE WG/21 requested the APAC IROGs (Thailand, Australia, Japan and Fiji) to provide updates to the Online Register on the capability to support the exchange of meteorological information in IWXXM form via each inter-regional circuit between the APAC and other ICAO regions' IROGs.

2.8. In addition, to facilitate greater visibility and awareness of the Online Register as a tool to support the dissemination of meteorological information in IWXXM form and encourage States to share updates on their IWXXM exchange capabilities, MET/IE WG/21 requested the Secretariat to provide a link for States to access the Online Register directly via the ICAO APAC Office "eDocuments" website.

2.9. Furthermore, noting that the global availability of meteorological information in IWXXM form depended on the capability of the IROGs in the APAC and other ICAO regions to exchange the IWXXM messages, MET/IE WG/21 considered the need for the implementation of the necessary network connections between the APAC and other ICAO Regions to be supported by the ACSICG.

2.10. To this end, and to support the reliable implementation of ICAO Annex 3 provisions for IWXXM dissemination on a global scale, MET/IE WG/21 also considered the need to facilitate, in consultation with the other ICAO Regions, the establishment between the IROGs of redundant paths (i.e., the primary circuits and backup paths).

2.11. Australia presents supporting discussion and a related proposal on the matters above in a separate paper under Agenda Item 8: *Inter-regional AFS/MPLS/IP based connection*; WP/10 – ACSICG Support for Progressing Inter-Regional IWXXM Exchange.

¹ To facilitate OPMET Data Exchange using IWXXM in the APAC region, the MET SG decided to include in the APAC ROBEX Handbook the following link to the Online Register of APAC IWXXM Exchange Status [MET SG/24, Decision MET SG/24-15 and Conclusion MET SG/24-12, refer]:
<https://docs.google.com/spreadsheets/d/1WEcGfMRZq2dgHsfdpFhiefJEcA8OeMhfbCJHTqA7NX0/edit#gid=0>

2.12. Given the discussion above, MET/IE WG/21 formulated the following Draft Conclusion:

Draft Conclusion MET/IE WG/21-03: GLOBAL EXCHANGE OF IWXXM	
What: That, ACSICG prioritise the implementation of intra- and inter-region network circuits, including support for the Air Traffic Services Message Handling System (AMHS) with File Transfer Body Part (FTBP) and Interpersonal Message Heading Extension (IHE), to support the global exchange of messages in the ICAO Meteorological Information Exchange Model (IWXXM) form.	Expected impact: <input type="checkbox"/> Political / Global <input checked="" type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: Aviation users require access to global OPMET information provided in IWXXM form. Without suitable communication network connections, global exchange will not be possible, preventing users from safely migrating from text to new IWXXM services.	Follow-up: <input type="checkbox"/> Required from States
When: 29-Mar-23	Status: Draft to be adopted by Subgroup
Who: <input type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

2.13. To further facilitate the regional discussion and progress on the matters above, MET/IE WG/21 considered the possibility of conducting a conjoint meeting session of the MET/IE WG and ACSICG in 2024. Historically MET/IE WG meets annually with Meteorological Services Working Group in March. MET/IE WG seeks ACSICG's view on the benefit of holding a conjoint MET/IE and ACSICG meeting.

2.14. Finally, to support meteorological information exchange initiatives more generally, MET/IE WG/21 proposed an update to its terms of reference to "coordinate and seek support from other enabling ICAO groups (e.g. SWIM TF, ACSICG, CRV OG, etc.)".

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Note the information contained in this paper;
- b) Consider the Draft Conclusion in para 2.12 (in conjunction with the proposal in WP/10) and discuss necessary follow-up actions;
- c) Consider the possibility of conducting a conjoint meeting session of the MET/IE WG and ACSICG in 2024; and
- d) Discuss any relevant matter as appropriate.

ATTACHMENT

Online Register of APAC IWXXM Exchange Status

Updated: 23 May 2023



ROC	ROC ready to receive IWXXM	ROC address to receive IWXXM	AMHS message size limit	AMHS supporting FTBP+IHE*	Disseminate IWXXM to ROCs	Disseminate IWXXM to NOCs	NOC	IWXXM generated	NOC ready to receive IWXXM	NOC address to receive IWXXM	Remarks	
Bangkok	VTBB	YES	/C=XX/A=ICAO/ P=THAILAND/ O=VTBB/ OU1=VTBB/ CN=VTBBYPYL/	4 MB	YES	VHHH, WSSS, YBBB, ZBBB	YES	Bangkok	VTBB	YES	YES	VTBBYMYX
								Phnom Penh	VDPP	YES	YES	VDPPYMYC
								Vientiane	VLVT		NO	
								Ha Noi	VVNB	YES	NO	
								Yangon	VYYY		NO	
Translation service by VTBB												
Beijing	ZBBB	YES	/C=XX/A=ICAO/ P=CHINA/ O=HQ/ OU1=ZBBB/ CN=ZBBBYPYL/	4 MB	YES	RJTD, VHHH, WSSS, YBBB		Beijing	ZBBB	YES		
								Ulaanbaatar	ZMUB	PARTIAL		
Brisbane	YBBN	YES	/C=XX/A=ICAO/ P=AUSTRALIA/ O=YBBN/ OU1=YBBB/ CN=YBBBYPYL/	4 MB	YES	NZKL, RJTD, VHHH, VTBB, WMKK, WSSS, ZBBB	No recipients ready	Brisbane	YBBN	YES		
								Port Moresby	AYPY	YES	NO	
								Nauru	ANYN	YES	NO	
								Honiara	AGGH	YES	NO	
								Dili	WPDJ	NO	NO	
Translation service by NZKL Translation service by NZKL Translation service by NZKL												
Colombo	VCCC	NO					Colombo	VCCC				
Delhi	VIDP	NO					Delhi	VIDP				
Kolkata	VECC	NO					Kolkata	VECC				
							Dhaka	VGZR				
							Paro	VQPR				
							Kathmandu	VNKT				
Mumbai	VABB	NO					Mumbai	VABB				
Hong Kong	VHHH	YES	/C=XX/A=ICAO/ P=HONGKONG/ O=HKGCAD/ OU1=VHHH/ CN=VHHHPYL/	4 MB	YES	NZKL, RJTD, VTBB, WMKK, WSSS, YBBB, ZBBB	YES	Hong Kong	VHHH	YES		
								Taipei City	RCTP	YES	YES	RCAAIWXM
								Manila	RPLL	YES	NO	
								Macao	VMMC	YES	NO	
								Translation service by VHHH Translation service by VHHH				
Incheon	RKSI	NO		Q4 2022			Incheon	RKSI	YES		Available through Open-API	
Jakarta	WIII	NO					Jakarta	WIII	YES			
Karachi	OPKC	NO					Karachi	OPKC				
Kuala Lumpur	WMKK	YES	/C=XX/A=ICAO/ P=MALAYSIA/ O=WM/ OU1=WMKK/ CN=WMKKYMXM/	4 MB	YES	WSSS		Kuala Lumpur	WMKK	YES		
								Brunei	WBSB	NO		
Nadi	NFFN	NO				NZKL, VHHH, VTBB, WSSS, YBBB		Nadi	NFFN	YES	NO	Translation service by NZKL TCA in IWXXM available (TCA Nadi)
								Cook Islands	NCRG	YES	NO	Translation service by NZKL
								Tonga	NFTF	YES	NO	Translation service by NZKL
								Tuvalu	NGFU	YES	NO	Translation service by NZKL
								Kiribati	NGTA	YES	NO	Translation service by NZKL
								Niue	NIUE	YES	NO	Translation service by NZKL
								Samoa	NSFA	YES	NO	Translation service by NZKL
								Vanuatu	NVVV	YES	NO	Translation service by NZKL
								New Caledonia	NWWW	YES	NO	Translation service by NZKL
								French Polynesia	NTAA	YES	NO	Translation service by NZKL
								American Samoa	NSTU	NO	NO	IWXXM by US NWS in the FT/SA/SP25 KBWC bulletins
Singapore	WSSS	YES					Singapore	WSSS	YES			
Tokyo	RJTD	YES					Tokyo	RJTD	YES		TC Advisory in IWXXM available via TCAC Tokyo website	
Washington	KWBC	NO				No recipients ready	Washington	KWBC	June 2023		New ROBB KWBC in Nov 2021. Open API will be available	
Wellington	NZKL	YES					Wellington	NZKL	YES			

Inter-regional exchange	IROG in APAC	IROG address to receive IWXXM	IROG in another Region	IROG address to receive IWXXM	Active dissemination to another Region	Active reception from another Region	Remarks
APAC - EUR	Singapore	WSSS	London	EGGG	YES	YES	Bandwidth between the exchange services was increased to 2Mbps. Backup procedures for the alternate path EGGG - LSSS (Geneve) - LIII (Rome) - VTBB (Bangkok) - WSSS are in place. Secondary backup procedures being explored for alternate path EGGG - KATL (Atlanta) - KSLC (Salt Lake City) - YBBB (Brisbane) - WSSS
APAC - NAM	Tokyo	RJTD	Washington	KWBC	NO	NO	Test of IWXXM exchange between IROG Tokyo and IROG Washington will be conducted in the near future.
APAC - AFI	Bangkok	VTBB	Pretoria	FAPR	NO	NO	No POC available / known at IROG Pretoria. Extended AMHS with FTBP in place via YBBN - FAOR. FAOR to FAPR (COMC to IROG) was not AMHS capable in 2020, nothing heard since
	Brisbane	YBBB					
APAC - SAM	Brisbane	YBBB	Brasilia	SBBR	NO	NO	No POC available / known at IROG Brasilia. Extended AMHS with FTBP in place via YBBN - KSLC - KATL - SBBR. Unknown what capability from COMC SBBR to IROG SBBR is ...
APAC - MID	Bangkok	VTBB	Jeddah	OEJD	NO	NO	Test of IWXXM exchange conducted since May 2022 but not successful due to COMC OOMS still AFTN, so Bangkok is awaiting COMC COMS migrate to Extended AMHS with FTBP connection.

* AMHS profile for IWXXM exchange is specified in the Appendix A of "Guidelines for the Implementation of OPMET Data Exchange using IWXXM"

For further information and update, please contact: Peter Dunda (pdunda@icao.int), Marco Kok (mkok@hko.gov.hk) or Pierre Kemmers (pierre.kemmers@airservicesaustralia.com)