

**ICAO ASIA/PACIFIC
 METEOROLOGICAL INFORMATION EXCHANGE WORKING GROUP
 (MET/IE WG)**

TERMS OF REFERENCE AND WORK PROGRAMME

1. COMPOSITION

The MET/IE WG is made up of members from States representing the five APAC Regional OPMET Data Banks (RODBs): *Australia/Brisbane, Fiji/Nadi, Japan/Tokyo, Singapore and Thailand/Bangkok*; the World Area Forecast System (WAFS), Secure Aviation Data Information Service (SADIS) and WAFS Internet File System (WIFS) Provider States: *United Kingdom and United States*; the three APAC Volcanic Ash Advisory Centres (VAACs): *Australia/Darwin, Japan/Tokyo and New Zealand/Wellington*; the designated focal points for SIGMET tests and regional OPMET bulletin exchange (ROBEX); and the International Air Transport Association (IATA).

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2. DESCRIPTION

Objective	Increase OPMET availability and reliability needed for flight planning (efficiency) and in-flight re-planning (safety) in support of the Global Air Navigation Plan framework and the aviation system block upgrade (ASBUs) methodology.
Benefits	Increase in safety and efficiency (time and fuel savings).
Terms of	Under guidance from the ICAO Secretariat:

Reference	<ul style="list-style-type: none"> a) Review the OPMET exchange schemes in the APAC and other regions and develop proposals for their optimization, taking into account the requirements by the aviation users and global OPMET exchange; b) Monitor and participate in trials of digital aeronautical meteorological information exchange inter- and intra- regionally; c) Develop standardized quality control, monitoring and management procedures related to exchange of IWXXM and TAC OPMET information; d) Review the regional guidance material related to OPMET exchange; e) Liaise and consult with other appropriate bodies within ICAO and WMO dealing with communication and/or management aspects of the OPMET exchange; and f) Provide advice and report to the MET Sub-group on the above issues for further co-ordination through the ICAO Secretariat with other appropriate bodies.
Work Programme	<p>The work to be addressed by the MET/IE WG includes:</p> <ul style="list-style-type: none"> - Examine new and existing requirements for OPMET exchange in APAC and other neighbouring regions along with the WAFS Provider States and assess the feasibility of satisfying these requirements, taking into account the availability of the data; - Keep the ROBEX scheme and other OPMET exchange schemes under review and prepare proposals for updating and optimizing the schemes; - Review and update of the procedures for inter-regional OPMET exchange and ensure the availability of the required APAC OPMET data for SADIS and WIFS; - Review the regional guidance material on OPMET exchange to ensure procedures are provided for the exchange of all required OPMET data; - Conduct trials and develop procedures for quality control, monitoring and management of the OPMET exchange to foster implementation of quality management of OPMET data by the ROBEX centres and the RODBs; - Develop quality control guidance material and promote implementation of quality control for OPMET management - Report on deficiencies in the format and dissemination of OPMET messages; - Participate in the implementation and promote awareness of the transition to digital exchange of OPMET using a code form based on IWXXM; - Conduct regular regional VAAC back-up and SIGMET tests; and - Provide support for the APAC Volcanic Ash Exercises.

3. COMMUNICATION STRATEGIES

Description	Target Audience	Delivery Method	Frequency / Date	Responsibility
Work Plan	MET/IE WG Members	Document via email & MET/IE WG Meeting	As required but reviewed at the MET/IE WG Meeting and the MET SG	Chair
General correspondence	MET/IE WG Members	Email	As required	MET/IE WG Members
Working Group Meeting	MET/IE WG Members	Meeting	Annually	Chair
Status & Milestone Reports	ICAO Secretariat and MET/IE WG	Report via email & WP at MET/IE WG	Annually	Chair

	Members	Meeting		
Task Force Report	All APAC States	Working Paper at MET SG	Annually	Chair

4. PERFORMANCE FRAMEWORK FORM (PFF)				
Tasks	Time Frame	Responsibility	Status	Milestone
Task 1: Improve the availability of OPMET data	Ongoing	MET/IE WG		1
Task 2: Improve timeliness, compliance and regularity of OPMET exchange	Ongoing	MET/IE WG		2
Task 3: Identify gaps and errors in processes, procedures and OPMET exchange	Ongoing	MET/IE WG		3, 4, 5
Task 4: Review regional guidance material related to OPMET data	Ongoing	MET/IE WG		3, 4, 5, 6
Task 5: Facilitate and monitor the migration to IWXXM in support of SWIM	2016-2018	MET/IE WG		7
Task 6: Review the OPMET Exchange structure	2017	MET/IE WG		8

5. MILESTONES			
Milestone	Accountability	Dates	Status
Milestone 1: Achieve 95% (90%) or greater OPMET availability for AOP (non-AOP) aerodromes where OPMET information is required at RODBs, SADIS and WIFS (i.e., aerodromes listed in former FASID Table MET 2A).	MET/IE WG	Annually Jun	
Milestone 2: Achieve OPMET timeliness, compliance and regularity index of 0.95 (0.90) for AOP (non-AOP) aerodromes where OPMET information is required at RODBs, Secure SADIS FTP and WIFS (i.e., aerodromes listed in former FASID Table MET 2A).	MET/IE WG	Annually Jun	
Milestone 3: SIGMETs tests conducted, analysed and report complete.	MET/IE WG	Annually Jun	
Milestone 4: VAAC Back-up tests conducted, analysed and report complete.	VAAC Back-up Focal Points	Annually Jun	
Milestone 5: IROG Back-up tests conducted, analysed and report complete.	Bangkok RODB	Annually Mar	
Milestone 6: RODB Monitoring procedures updated in ROBEX Handbook.	Secretariat	Jun 2014	
Milestone 7: Report to MET/IE WG & MET SG on IWXXM exchange & testing.	Secretariat & Chair	Annually Mar &	

		May	
Milestone 8: OPMET Exchange structure review complete.	MET/IE WG	2017	
Milestone 9: Improved efficiency and effectiveness of ROBEX scheme.	RODBs	Annually Jun	

6. WORK PLAN				
Activity / Milestone	Accountability	Predecessors	Date	Status
Activity 1: Increasing OPMET availability for aerodromes where OPMET information is required at RODBs, Secure SADIS FTP and WIFS (i.e., aerodromes listed in former FASID Table MET 2A)				
Activity 1.1: Perform real time monitoring if required	RODBs & IATA	-	If required	
Activity 1.2: Monitor RODB OPMET reception in Jan and use Dec as PI threshold.	RODBs	-	Annually Dec/Jan	
Activity 1.3: Monitor SADIS/WIFS OPMET reception.	IATA	-	Annually Jan	
Activity 1.4: Score against ANP Table MET II-2 (and former FASID Table MET 2A).	RODB Bangkok & IATA	1.3 & 1.4	Annually Feb	
Activity 1.5: Prepare ROBEX paper and report results and deficiencies to MET/IE WG meeting.	RODB Bangkok & IATA	1.5	Annually Mar	
Activity 1.7: Report summary of OPMET availability results to MET SG	Secretariat & Chair	1.6	Annually May	
Activity 1.8: Advise States of OPMET deficiencies.	Secretariat	1.7	Annually Jun	
Activity 1.9: Provide support for States to rectify deficiencies if requested.	RODBs	1.8	As required	
Milestone 1: Achieve 95% (90%) or greater OPMET availability for AOP (non-AOP) aerodromes at RODBs & WAFS.	MET/IE WG	1.9	Annually Jun	
Activity 2: Improving OPMET timeliness, compliance and regularity at RODBs and WAFS Internet based Services				
Activity 2.1: Monitor & collate OPMET data.	RODBs & IATA	-	Annually Dec/Jan	

6. WORK PLAN				
Activity / Milestone	Accountability	Predecessors	Date	Status
Activity 2.2: Analyse data	Bangkok RODB & IATA	2.1	Annually Feb	
Activity 2.3: Prepare paper and report State irregularities to MET/IE WG meeting	Bangkok RODB & IATA	2.2	Annually Mar	
Activity 2.4: Report summary of OPMET timeliness, compliance and regularity results to METSG	Chair	2.3	Annually May	
Activity 2.5: Inform States of compliance	Secretariat	2.4	Annually Jun	
Activity 2.6: Provide support for States to rectify deficiencies if requested.	RODBs	2.5	As required	
Milestone 2: Achieve 95% (90%) or greater OPMET timeliness, compliance and regularity for AOP (non-AOP) aerodromes at RODBs & WAFCS.	MET/IE WG	2.6	Annually Jun	
Activity 3: SIGMET Tests				
Activity 3.1: Review SIGMET Test procedures	MET/IE WG	-	Annually Aug	
Activity 3.2: State Letter regarding SIGMET Tests	Secretariat	3.1	Annually Sep	
Activity 3.3: Conduct WC SIGMET Tests	RODBs	3.2	Annually 1 st Wed in Nov	To be conducted on 2 Nov 2016
Activity 3.4: Conduct WV SIGMET Tests	RODBs	3.2	Annually 2 nd Wed in Nov	To be conducted on 9 Nov 2016
Activity 3.5: Conduct WS SIGMET Tests	RODBs	3.2	Annually 3 rd Wed in Nov	To be conducted on 16 Nov 2016
Activity 3.6: Collate and analyse test data against ANP Table MET II-2 (and former FASID Table MET 2A)	RODBs	3.3 - 3.5	Annually Jan	
Activity 3.7: Report to MET/IE WG	SIGMET Focal Points	3.6	Annually Mar	
Activity 3.8: Report on SIGMET Test Results to MET SG.	Chair	3.7	Annually May	

6. WORK PLAN				
Activity / Milestone	Accountability	Predecessors	Date	Status
Activity 3.9: Advise States of SIGMET deficiencies	Secretariat	3.8	Annually Jun	
Milestone 3: Improved issuance and compliance of test SIGMETs	MET/IE WG	3.9	Annually Jun	
Activity 4: VAAC Back-up Tests				
Activity 4.1: Review VAAC Back-up Test procedures	MET/IE WG and VAACs		Annually Jan	
Activity 4.2: Update VAAC Back-up Procedures	Secretariat	4.1	Annually May	
Activity 4.3: Issue Notice of VAAC Back-up Tests	Secretariat/VAA Cs	4.1	Annually Aug	
Activity 4.4: Conduct VAAC Back-up Test between Darwin and Tokyo	VAACs	4.3	Annually Oct – TBC	
Activity 4.5: Conduct VAAC Back-up Test between Darwin and Wellington	VAACs	4.3	Annually Oct – TBC	
Activity 4.6: Collect test results and send to VAAC Provider State members	RODBs	4.4	Annually Oct – TBC	
Activity 4.7: Analyse Test results	VAAC Back-up Focal Points Members	4.5	Annually Nov	
Activity 4.8: Report to MET/IE WG	VAAC Back-up Focal Points Members	4.6	Annually Feb	
Activity 4.9: Report to MET SG.	Chair	4.8	Annually May	
Activity 4.10: Advise relevant States, VAACs and RODBs of any deficiencies.	Secretariat	4.7	Annually Jun	
Milestone 4: VAAC Back-up Tests conducted, analysed and report complete.	VAAC Back-up Focal Points Members	4.8	Annually Jun	
Activity 5: IROG Back-up Tests				
Activity 5.1: Investigate back-up arrangements of IROG Tokyo & Brisbane	Secretariat	-	TBA	
Activity 5.2: Review IROG Back-up Test procedures to include all IROG.	All IROGs	-	Annually Feb	
Activity 5.3: Updated IROG Back-up Procedures in ROBEX Handbook.	Secretariat	5.2	Annually May	

6. WORK PLAN				
Activity / Milestone	Accountability	Predecessors	Date	Status
Activity 5.4: Identify list of MET Bulletins to monitor.	All IROGs	-	Annually Jan/Feb	
Activity 5.5: Conduct IROG Back-up Tests	All IROGs	5.4	Annually Jan/Feb	
Activity 5.6: Collect & analyse test results	All IROGs	5.5	Annually Feb	
Activity 5.7: Report to MET/IE WG	Bangkok RODB	5.6	Annually Mar	
Milestone 5: IROG Back-up Tests conducted, analysed and report complete.	Bangkok RODB	5.7	Annually Mar	
Activity 6: APAC RODB Monitoring procedures				
Activity 6.1: Letter to ROBEX Centres requesting confirmation that ROBEX Handbook Appendix A, B & C has the correct information regarding the Bulletins. Also ask for Hours of Operation and Issue Times of METAR and TAF.	Secretariat	-	Annually May	
Activity 6.2: Review monitoring procedure in ROBEX Handbook and update as necessary.	All RODBs	-	Annually Aug	
Activity 6.3: Any changes to RODB monitoring procedures and updates to Appendix A, B and C in ROBEX Handbook.	Secretariat	6.1 & 6.2	Annually Sep	
Milestone 6: RODB Monitoring procedures updated in ROBEX Handbook	Secretariat	6.4	Annually Sep	
Activity 7: New OPMET Exchange Formats				
Activity 7.1: Monitor migration to IWXXM.	WG	-	As required	
Activity 7.2: Undertake IWXXM tests with other centres.	WG		2018	
Activity 7.3: Report to MET SG on plans for implementation of XML schema at APAC RODBs.	Secretariat		Next meeting MET SG	

6. WORK PLAN				
Activity / Milestone	Accountability	Predecessors	Date	Status
Activity 7.4: Consider options and strategies for the exchange of OPMET data in IWXXM format	WG		Feb 2016	
Activity 7.5: Increase awareness of the requirement for States to exchange of OPMET data in IWXXM format and the impact of inability to do so.	WG		As required	
Activity 7.6: Report to MET/IE WG on the status of the testing and implementation of digital OPMET exchange.	RODBs		Annually Mar	
Activity 7.7: Report to MET/IE WG regarding testing and implementation of digital OPMET exchange internationally.	Secretariat		Annually Mar	
Activity 7.8: Prepare information (e.g. issues, CONOPS) for MET/P WG-MIE	WG		Feb 2016	
Milestone 7: Report to MET/IE WG & MET SG on IWXXM exchange & testing.	Secretariat & Chair	7.7	Annually May	
Activity 8: Review OPMET Exchange Structure				
Activity 8.1: Review ROBEX Scheme diagram vs Table in 11.1 of ROBEX Handbook.	All RODBs		May Annually	
Activity 8.2: Review AFTN network diagram and add an AMHS diagram in the ROBEX Handbook.	Secretariat	-	May Annually	Note: a replacement CNS Chart is not available.
Activity 8.3: Review role and responsibilities of OPMET exchange taking into account: <ul style="list-style-type: none"> ○ Capability; ○ IWXXM readiness; ○ Delivery methods (internet, AMHS); ○ New Products (i.e. ATM requirements); ○ International consistency. 	WG	-	2017	
Activity 8.4: Investigate the necessity to include guidance related to IWXXM in the ROBEX Handbook.	WG		June 2016	

6. WORK PLAN				
Activity / Milestone	Accountability	Predecessors	Date	Status
Milestone 8: RODB structure review complete.	MET/IE WG	-	2017	
Activity 9: Improve Efficiency and effectiveness of ROBEX Scheme				
Activity 9.1: Align content of SA bulletins with FT bulletins, where appropriate	All RODBs	-	May 2016	
Activity 9.2: Adjust FT bulletin filing time, where appropriate	All RODBs	-	TBA	
Activity 9.3: Advise States who issue TAFs early of ICAO required lead times	Secretariat	-	June 2016	
Activity 9.4: Review ANP Table MET II-2 and ensure all necessary aerodromes are contained in OPMET bulletins	All RODBs	-	May Annually	
Activity 9.5: Review and update ROBEX HB and ICD to align with OPMET bulletin contents	All RODBs	-	Feb Annually	
Activity 9.6: Review and update ROBEX HB and ICD to eliminate duplication of OPMET bulletin information.	MET/IE WG	-	June 2016	
Milestone 9: Improved efficiency and effectiveness of ROBEX Scheme	MET/IE WG	-	2017	
