



**Agenda Item 3: Review of Project H4 – Optimization of OPMET Exchange, including  
SIGMETs (WS, WV, WC, and WR), Warnings and Meteorological Alerts**

**Future programme of Project H4 - Optimization of OPMET Exchange, including SIGMETs (WS,  
WV, WC, and WR), Warnings and Meteorological Alerts**

(Presented by the Secretariat)

SUMMARY	
This working paper presents the future work programme of Project H4 - Optimization of OPMET Exchange, including SIGMETs (WS, WV, WC, and WR), Warnings and Meteorological Alerts in view of Proposal for Amendment 77 to ICAO Annex 3 and the future implementation of the SWIM (System Wide Information Management).	
<b>References:</b> <ul style="list-style-type: none"><li>• Annex 3 – <i>Meteorological Service for International Civil Aviation</i></li><li>• Doc 9750 – Global Air Navigation Plan</li><li>• Report of GREPECAS 17</li><li>• Report of MET/Divisional Meeting/2014</li><li>• Report of OPMET/2014 Meeting</li><li>• Guide for the preparation and transmission of OPMET information in the CAR/SAM Regions</li></ul>	
<b>ICAO strategic objectives:</b>	<i>A - Safety</i> <i>B – Air navigation capacity and efficiency</i>

**1. Introduction**

1.1 GREPECAS/17 reviewed the development of Project H4 and formulated a conclusion in this regard.

1.2 In March 2015, proposal for amendment 77 to ICAO Annex 3 was circulated to States and one of the issues included was the transmission of OPMET data in XML/GML format.

1.3 The MET Divisional Meeting (MET/14) analyzed the availability of OPMET data in a SWIM environment and formulated several recommendations in this respect.

1.4 The Programmes and Projects Review Committee (PPRC), in its third meeting, analyzed the development of Project H4 and suggested a modification of its work programme, taking into account proposal for amendment 77 to Annex 3, the errors detected in the OPMET controls developed by the Brasilia International OPMET Databank (IODB), and the recommendations of the Aeronautical Meteorology Divisional Meeting regarding OPMET data.

## 2. **Analysis**

2.1 The OPMET 2014 Meeting analyzed the recommendations of Appendix 3, 2.1.3, Appendix 5, 1.1.2 and Appendix 6, 1.1.6 of ICAO Annex 3, regarding the possibility of transmitting the OPMET data in digital format among the States in a position to do so. It also took into account the following items, where it is indicated that if the OPMET data transmission is disseminated in digital form, it shall be formatted in accordance with a globally interoperable information exchange model and shall use extensible markup language (XML)/geography markup language (GML).

2.2 ICAO circulated to States proposal for amendment 77 to Annex 3 – Meteorological service for international air navigation, through which the issues mentioned in 2.1 above, will become recommendations. According with the planning mentioned in MET/14 Meeting, these points would be included as STANDARD for amendment 78 to Annex 3, foreseen for 2019.

2.3 The results of the different OPMET controls developed by the Brasilia International OPMET Databank have shown that the efficiency in the transmission of the data has initially experienced values far below the objective of Project H4.

2.4 The Meeting should consider that the ASBU (Aviation System Block Upgrades) methodology, contained in Doc 9750, Global Air Navigation Plan, foresees that for 2018 the SWIM should be implemented.

## 3. **Discussion**

3.1 The Meeting should consider the issues related to the efficiency of the exchange of OPMET messages in the SAM Region, with regard to the steps to follow in order to increase this efficiency and the quality of the data distributed in the international circuits of OPMET information exchange. The implementation of the transmission of OPMET data in XML/GML format should also be considered, as well as the future implementation of the SWIM.

3.2 In this regard, the Meeting could extend the work programme of Project H4 and schedule the different tasks that should be developed, among which it would be very important to proceed with the update of the Guide for the preparation and transmission of OPMET information in the CAR/SAM Regions.

3.3 In order to establish these tasks, the objectives, the termination dates and the assignment of experts, the work programme initially approved, presented as **Appendix A** to this working paper, could be used as reference

## 4. **Suggested action**

4.1 The Meeting is invited to:

- a) take note of the information provided in this working paper;
- b) review and analyze Appendix A; and
- c) agree on other actions as necessary.

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## APPENDIX A

## PROJECT FOR THE OPTIMISATION OF OPMET EXCHANGE, INCLUDING SIGMETs (WS, WV, WC, AND WR), WARNINGS AND METEOROLOGICAL ALERTS

SAM Region	PROJECT DESCRIPTION (DP)	DP N° H4	
Programme	Title of the project	Start	End
Aeronautical meteorology  (Programme coordinator: Nohora Arias)	<p><i>Optimisation of OPMET exchange, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts</i></p> <p><i>Project coordinator: Cleber Souza Correa (Brazil)</i></p> <p><i>Experts contributing to the project:</i></p> <p><i>Aníbal Castro Cárdenas (Bolivia)</i>  <i>Valdeci Donizeti Juliar da Franca (Brazil)</i>  <i>Domingo Torres (Ecuador)</i>  <i>Celestino Lamboglia (Panama)</i></p> <p><i>Miguel Vara (Peru)</i>  <i>Warsodikromo Truusje Soetinie (Surinam)</i>  <i>Tjiettra Akloe (Surinam)</i>  <i>José Ramón Pereira Bastida (Venezuela)</i></p>	December 2011	November 2013
<b>Objective</b>	Achieve at least 95% efficiency in the preparation and dissemination of OPMET information to SAM States by 31 November 2013		
<b>Scope</b>	Correct preparation and timely dissemination of OPMET information involves all MET service units [(EMA(s), OMA(s), MWO(s) and OPMET data banks] of all SAM aerodromes listed in the CAR/SAM ANP.		
<b>Metrics</b>	The percentage of OPMET messages received on time at the Brasilia International OPMET Data Bank (according to Annex 3, Appendix 10, OPMET control considers as messages received those OPMET messages with transit times of 10 minutes) and verification of proper and standard production (quality) of OPMET information at MET services [(EMA(s), OMA(s), and MWO(s)] (Annex 3, in Appendices 3, 4, 5, and 6, contains the (OPMET) message planning tables.		
<b>Strategy</b>	All tasks will be carried out by experts nominated by SAM States (Points of Contact – POC) and by experts contributing to the project, led by the Project Coordinator and under the supervision of the MET Programme Coordinator through State letters sent by the ICAO Lima Office, by e-mail, and the “GoToMeeting” tool. Upon completion of the tasks, the results will be sent to the MET Programme Coordinator as a final document for submission to, and if necessary approval by, the GREPECAS CRPP through the GREPECAS fast-track procedure. For the purpose of collaborative decision-making, meetings will be held with the areas involved.		
<b>Goals</b>	a) Reach 85% in the reception of OPMET data of the SAM Region in the Brasilia on 31/12/12; and 95% on 31/10/13 b) Reach 85% in the reception of OPMET data in each SAM State on 31/12/12; and 95% on 31/10/13		
<b>Rationale</b>	More timely meteorological information will optimise flight path planning and prediction, thus improving ATM system safety and efficiency, pursuant to GREPECAS Conclusion 12/64 (CAR/SAM OPMET EXCHANGE CONTROLS). Meteorological information will also minimise the environmental impact of air traffic.		
<b>Related projects</b>	<ul style="list-style-type: none"> <li>➤ Automation</li> <li>➤ Implementation of ATFM</li> <li>➤ Installation of AMHS at MET units having an international OPMET requirement</li> <li>➤ Implementation of the MET information quality management system (QMS/MET)</li> <li>➤ Enhanced ATM situational awareness</li> <li>➤ Implementation of the new flight plan format (FPL)</li> </ul>		

Project Deliverables	Relationship with the performance-based regional plan (PFF) <sup>1</sup>	Responsible Party	Status of Implementation <sup>2</sup>	Date of Delivery	Comments
OPMET guide revised and updated	PFF SAM MET 02	MET programme coordinator and project coordinator		September 2012	The OPMET guide prepared by the SAM Office will include procedures for preparing OPMET data and tables containing the AFTN addresses to which OPMET information must be sent worldwide in accordance with the CAR/SAM FASID, thus facilitating the preparation and issuance of MET messages.
Results of coordinated controls of annual SIGMET WV tests	PFF SAM MET 02	POC and BR OPMET data bank		February 2013	The measurement of SIGMET WV messages received on time at the Brasilia International OPMET Data Bank will give the actual percentage of OPMET data, and the verification of the proper preparation of SIGMET WV messages at MWO(s) will permit an assessment of OPMET information quality.
Results of the analysis of coordinated controls of annual SIGMET WV tests	PFF SAM MET 02	MET programme coordinator and project coordinator		May 2013	The results obtained from the coordinated controls of annual SIGMET WV tests will allow programme and project coordinators to adopt, if necessary, corrective action for subsequent coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts.
Results of coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts	PFF SAM MET 02	POC and BR OPMET data bank		August 2013	Timely measurements at the Brasilia International OPMET data bank will provide the actual percentage of OPMET data received, and the verification of the proper preparation of OPMET information at MET services [(EMA(s), OMA(s), and MWO(s))] will permit to assess the quality of OPMET information.
Results of the analysis of coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts	PFF SAM MET 02	MET programme coordinator and project coordinator		August 2014	The results obtained from coordinated controls of OPMET information, including SIGMETs (WS, WV, WC, and WR), warnings and meteorological alerts will give programme and project coordinators an idea of project results.

Final project report	PFF SAM MET 02	MET programme coordinator and project coordinator		November 2013	The purpose of the final project report to be submitted by the programme coordinator is to enable the Lima SAM Office to check the achievements of the project and propose to the States future measures to maintain the level attained through OPMET controls.
<b>Resources needed</b>	Funds for meetings with project members in order to assess the results and propose corrective actions. States could use their human resources to conduct the foreseen OPMET tests and controls, and, if necessary, cover the financial costs, since the experience gained will result in an improvement of their own systems. Likewise, participants must be given facilities to participate in GoToMeetings.				

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<sup>1</sup> Air navigation system Performance-Based Implementation Plan for the SAM Region

<sup>2</sup> *Grey Task not started yet*  
*Green Activity being implemented as scheduled*  
*Yellow Activity started with some delay, but will be implemented on time*  
*Red Activity not implemented on time; mitigation measures are required*