International Civil Aviation Organization SAM/IG/9-WP/08
South American Regional Office 8/05/12
Assistance in the implementation of an ATM regional system according to the ATM operational concept and the corresponding technological CNS support
Ninth Workshop/Meeting of the SAM Implementation Group (SAM/IG/9) - Regional Project RLA/06/901
Lima, Peru, 14 to 18 May 2012

Agenda Item 7: Operational implementation of new ATM automated systems and integration of the existing systems

FOLLOW-UP TO THE IMPLEMENTATION OF THE IMPROVE ATM SITUATIONAL AWARENESS PROJECT FOR THE SAM REGION

(Presented by the Project Coordinator)

SUMMARY

This working paper presents information on the progress made in the implementation of situational awareness activities for the SAM Region.

REFERENCE:

- Report of the eighth workshop/meeting of the SAM Implementation Group (SAM/IG/8) (Lima, Peru, 10-14 October 2012);
- Fifth meeting of RLA/06/901 Coordination Committee (Lima, Peru, 28-30 November 2011); y
- Report of the first meeting of the GREPECAS Programmes and Projects Review Committee (Ciudad de México, México, 25-27 de abril de 2012).

ICAO strategic objectives:	*A – Safety* *C - Environmental Protection and Sustainable Development of Air Transport*

1. Background

1.1 The SAM/IG/8 meeting examined the activities outlined in the *Improve ATM situational awareness* in the SAM Region Project, as well as the deliverables proposed within the activities of the Project.

1.2 In this regard, the Project deliverables were modified, being the new ones for SAM/IG/9 meeting, the following:

a) Updating of the regional surveillance strategy for the implementation of systems in support of situational awareness improvements;
b) Regional coverage analysis to current surveillance systems;
c) Guideline on technical operational considerations guideline for ADS-B implementation;
d) Guideline in support of ATFM implementation; and
e) Guideline for the elaboration of SIGMET in graphic format.

1.3 The Meeting deemed it convenient that, with the aim of completing the drafting of the above guidelines, consideration be given to obtain support from RLA/06/901 project for their elaboration, through the hiring of an CNS expert, which was approved by the fifth meeting of the Project RLA/06/901 Coordination Committee (RCC/5).

2. **Analysis**

2.1 The *Improve ATM situational awareness in the SAM Region* Project was presented at the first meeting of the GREPECAS Programmes and Projects Review Committee (PPRC/1). In same, it was urged that experts of the Region take responsibility in developing the activities of the Project that had no one assigned for its conduct. **Appendices A and B** present the description of the Project, as well as the programme of activities, approved by PPRC/1 meeting.

2.2 With respect to the status of implementation of the Project activities, the *Guideline on technical operational considerations guideline for ADS-B implementation* is scheduled to be completed by June 2012, by the Peruvian experts from the technical and operational areas. **Appendix C** shows the initial contents of the Guide. The Guide will be presented at SAM/IG/10 meeting.

2.3 In addition, the tasks for the drafting of the *Guideline for the elaboration of SIGMET in graphic format* has started, being developed by Peruvian MET, CNS, ATM experts and telecommunications operators. The Guide, whose initial contents are shown in **Appendix D**, will be presented at SAM/IG/10 meeting.

3. **Action suggested**

3.1 The Meeting is invited to:

a) Take note of the information presented;
b) Examine the Project *Improve ATM situational awareness in the SAM Region* described in this working paper, and consider the nomination of experts for the Project activities without responsible assigned for their conduct;
c) Analyze the initial contents of the *Guideline on technical operational considerations guideline for ADS-B implementation* and *Guideline for the elaboration of SIGMET in graphic format* shown in Appendices C and D to this working paper for the approval of the Meeting; and
d) Analyze any other aspects related with this Agenda Item that the Meeting might deem necessary.

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APPENDIX A

PROJECT IMPROVE ATM SITUATIONAL AWARENESS IN THE SAM REGION

SAM Region	**PROJECT DESCRIPTION (PD)**	**PD N° C2**	
Programme	**Project Title**	**Starting Date**	**Ending Date**
ATM Automation and Situational Awareness *(Programme Coordinator: Onofrio Smarrelli*)	Improve ATM Situational Awareness in the SAM Region *Project Coordinator: Paulo Vila (Peru)* *Contributing experts: José Rubira, Marcos Vidal, Jorge Otiniano and Daniel Gomez (Peru); Javier Vittor (Argentina)*	October 2011	November 2013
Objective	Develop guidelines supporting the implementation of improvements in the situational awareness of ATS units in the South American Region		
Scope	Guidelines supporting the implementation of various applications, such as common traffic visualization, common meteorological conditions visualization and communications in general • Analysis of the current surveillance infrastructure and identification of necessary improvements to support en route and terminal airspaces, airspace classification, PBN and ATFM • Implementation of ADS-B, ADS-c and/or MLAT surveillance systems at selected airspaces • Minimum common electronic information and data bases required in support of decision-making process and alert systems towards an interoperable situational awareness among centralized ATFM units • Implement flight plan data process systems (new FPL format) and data communications tools among ACC´s • Implement advanced automation support tools to contribute towards the sharing of aeronautical information		
Metrics	Drafting of following documents: • Regional surveillance strategy for the implementation of systems in support of improvement of situational awareness – revised • Evaluation of the surveillance systems coverage in the SAM Region - completed • Guideline on technical/operational considerations for ADS-B implementation - completed • Guideline on technical/operational considerations for MLAT implementation - completed • Guideline on technical considerations in support of ATFM implementation - completed • Guideline for the drafting of SIGMET in graphical format - completed		

Strategy	• All tasks will be conducted by experts nominated by States and organizations of the SAM Region members of the Project *Improve ATM situational awareness in the SAM Region*, under management of the project coordinator, in coordination with the programme coordinator. Communications among project members, as well as between the project coordinator and programme coordinator, shall be carried out through teleconferences and the Internet. In addition, the programme coordinator, together with the project coordinator and the contributing experts, can convene at SAM/IG implementation meetings • Once studies are completed, the results will be submitted to the ICAO programme coordinator as a final consolidated document for its analysis, review, approval and presentation at the GREPECAS PPRC
Justification	• Improve situational awareness has been identified as a great support for ATM, contributing in the increase of safety and in flight efficiency • During the seventh meeting of the SAM Implementation Group (SAM/IG/7), a review was made to the project *Improve ATM situational awareness in the SAM* Region, considering the nomination of a coordinator for the SAM Region • In addition, a close relationship with the other programmes and their respective projects is necessary, with the aim of collecting the operational requirements demanded by the mentioned applications and their respective tentative implementation dates • This project contributes to the implementation of SAM PFF CNS 04, ATM 05, ATM 06 and MET 03 of the *Air Navigation System Performance-Based Implementation Plan for the SAM Region (SAM PBIP)*
Related Projects	• Air Navigation Systems in Support of PBN • Automation • ATFM • Implementation of the ICAO New Flight Plan Format • ATN Ground-ground and Air-ground Applications

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation[1]	Delivery Date	Remarks
Evaluation of surveillance infrastructure and identification of surveillance systems improvements					
Revision to regional surveillance strategy for the implementation of systems in support to improvement of situational awareness	PFF SAM CNS 04 PFF SAM ATM 06	Paulo Vila (Peru)		June 2012	An initial revision to the strategy was presented at SAM/IG/8 meeting (Lima, Peru, 10-14 October 2011)
Evaluation of current surveillance systems coverage in the SAM Region	PFF SAM CNS 04	TBD		October 2012	Some surveillance coverage diagrammes have been provided by States of the Region Designation of an expert for the conduct of the activity is pending
Drafting of regional plan for ADS-B and MLAT implementation					
Guideline on technical/ operational considerations for ADS-B implementation	PFF SAM CNS 04 PFF SAM ATM 06	José Rubira (Peru) Marco Vidal (Peru)		June 2012	The guideline will be based on the Peruvian experience regarding the progress in the implementation of ADS-B in Pisco
Guideline on technical/ operational considerations for MLAT implementation	PFF SAM CNS 04 PFF SAM ATM 06	TBD		June 2013	Designation of an expert for the conduct of the activity is pending

[1] ***Gray**: Activity has not started*
***Green**: Activity has or will deliver planned milestone as scheduled*
***Yellow**: Activity is behind schedule on milestone, but still within acceptable parameters to deliver milestone on time*
***Red**: Activity has failed to deliver milestone on time, mitigation measures need to be identified and implemented*

Project Deliverables	Relationship with Performance Based Regional Plan (PFF)	Responsible	Status of Implementation[1]	Delivery Date	Remarks
Guideline on technical considerations in support of ATFM implementation	PFF SAM CNS 01 PFF SAM ATM 05	Javier Vittor (Argentina)		October 2013	The guideline will base itself on the CAR/SAM ATFM Manual approved through GREPECAS Conclusion 16/35
Guideline for the drafting of SIGMET in graphical format	PFF SAM MET 03	Jorge Otiniano (Peru) Daniel Gómez (Perú)		October 2012	The guideline will be based on the Peruvian experience in the use of meteorological information in graphical format, including the SIGMET
Monitor the implementation of improving ATM situational awareness activities in the SAM Region		ICAO		March 2010- October 2013	
Resources necessary	Designation of experts for the conduct of the deliverables				

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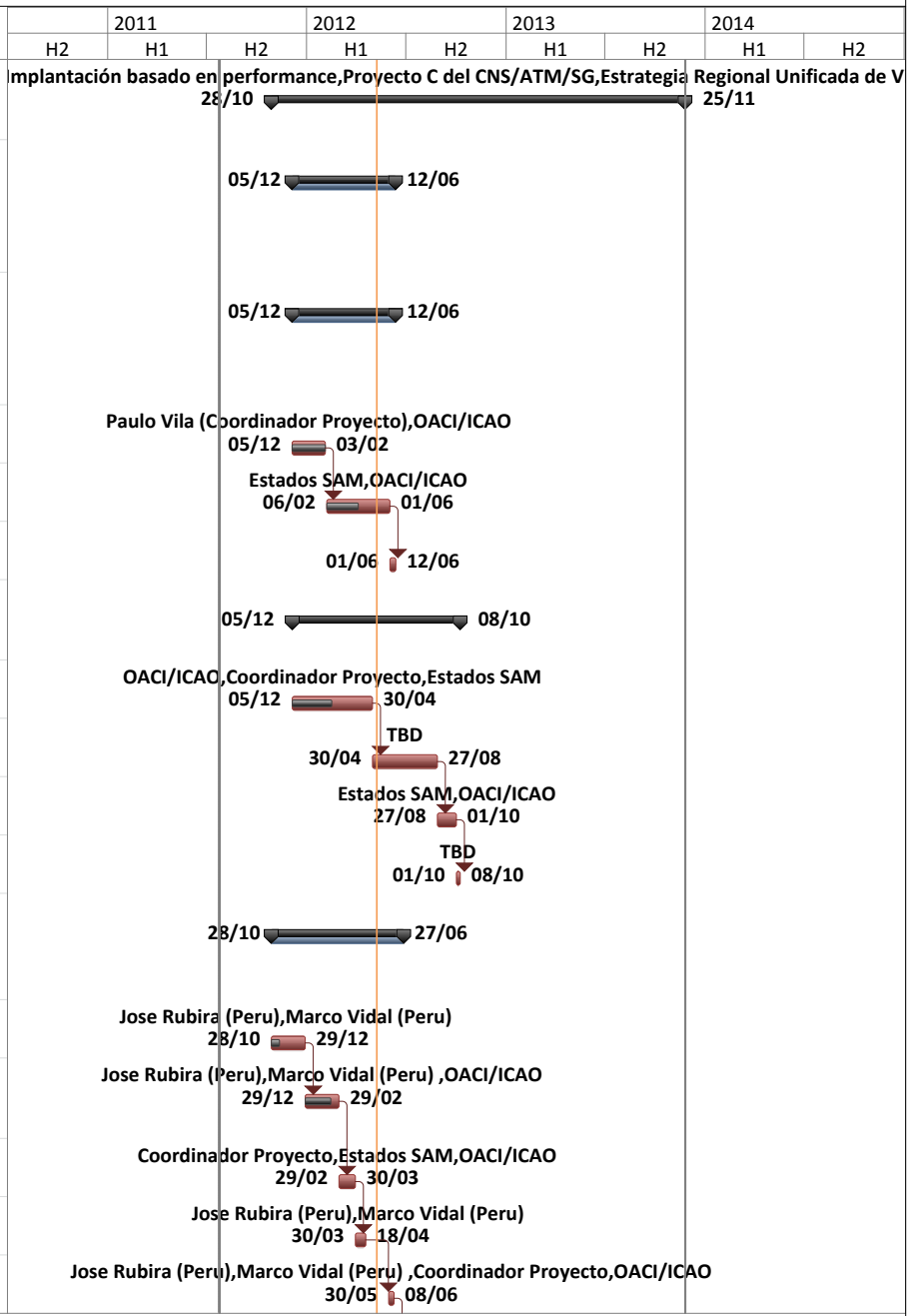
APPENDIX B / APENDICE B

MEJORA A LA COMPRESION SITUACIONAL ATM EN LA REGION SAM / IMPROVE ATM SITUATIONAL AWARENESS IN THE SAM REGION

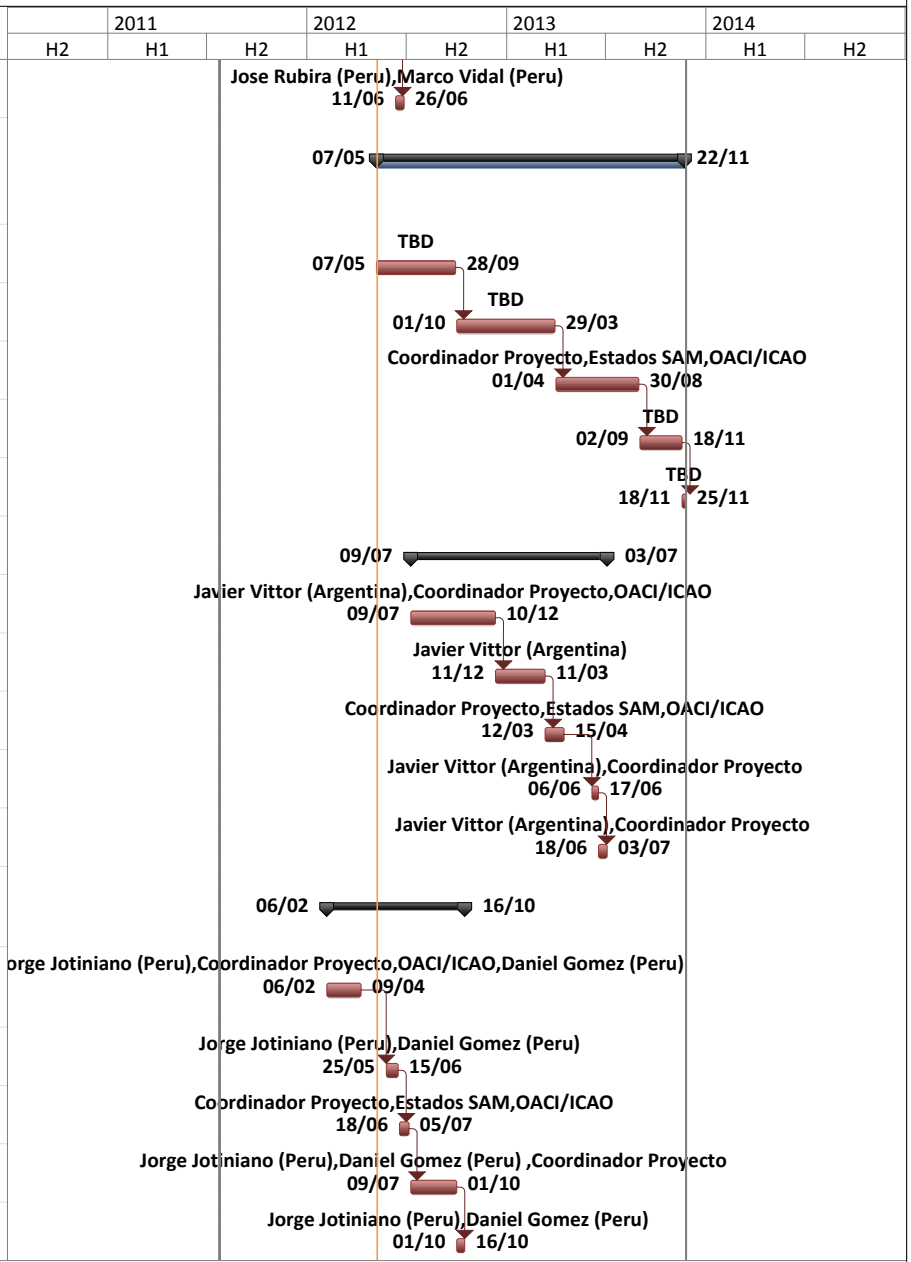
ID	Nombre de tarea	Duration	Start	Finish
1	**MEJORA A LA COMPRESION SITUACIONAL ATM EN LA REGION SAM / IMPROVE ATM SITUATIONAL AWARENESS IN THE SAM REGION**	**541 days**	**Fri 28/10/11**	**Mon 25/11/13**
2	**Evaluación de la infraestructura de vigilancia e identificación de mejoras a los sistemas de vigilancia / Develop guidelines supporting the implementaion of improvements in the situation awareness of ATS units in the South American Region**	**136 days**	**Mon 05/12/11**	**Tue 12/06/12**
3	**Revisión estrategia regional vigilancia para implantación sistemas en apoyo a mejora comprensión situacional/Revision to regional surveillance strategy for implementation of systems in support situational awareness improvement**	**136 days**	**Mon 05/12/11**	**Tue 12/06/12**
4	Recolectar información / Collect information	45 days	Mon 05/12/11	Fri 03/02/12
5	Proceso de revisión / Reviewing process	84 days	Mon 06/02/12	Fri 01/06/12
6	Entrega documento final / Delivery of final document	7 days	Fri 01/06/12	Tue 12/06/12
7	**Evaluacion de la cobertura actual en los sistemas de vigilancia / Evaluation of the current surveillance system coverage**	**220 days**	**Mon 05/12/11**	**Mon 08/10/12**
8	Collect information / Recolectar información	105 days	Mon 05/12/11	Mon 30/04/12
9	Entrega de propuesta de borrador / Delivery of draft proposal	85 days	Mon 30/04/12	Mon 27/08/12
10	Revision de la propuesta borrador / Review of draft proposal	25 days	Mon 27/08/12	Mon 01/10/12
11	Entrega documento final / Delivery of final document	5 days	Mon 01/10/12	Mon 08/10/12
12	**Guía de orientación con consideraciones técnicas/operacionales para la implantación de la ADS-B / Guidelines on technical/operational considerations for ADS B implementaion**	**173 days**	**Fri 28/10/11**	**Wed 27/06/12**
13	Recolectar información / Collect information	44 days	Fri 28/10/11	Thu 29/12/11
14	Apoyo en el suministro de información referente a las iniciativas existentes / Support on the information supply related to current initiatives	44 days	Thu 29/12/11	Wed 29/02/12
15	Entrega de propuesta de borrador/Delivery of draft proposal	22 days	Wed 29/02/12	Fri 30/03/12
16	Revision de la propuesta borrador/Review of draft proposal	13 days	Fri 30/03/12	Wed 18/04/12
17	Ajustes finales al documento/Final document adjustments	8 days	Wed 30/05/12	Fri 08/06/12



APPENDIX B / APENDICE B

MEJORA A LA COMPRESION SITUACIONAL ATM EN LA REGION SAM / IMPROVE ATM SITUATIONAL AWARENESS IN THE SAM REGION

ID	Nombre de tarea	Duration	Start	Finish
18	Entrega documento final/Delivery of final document	12 days	Mon 11/06/12	Tue 26/06/12
19	**Guía de orientación con consideraciones técnicas/operacionales para la implantación MLAT / Guideline on technical/operational considerations for MLAT implementation**	**405 days**	**Mon 07/05/12**	**Fri 22/11/13**
20	Recolectar información/Collect information	105 days	Mon 07/05/12	Fri 28/09/12
21	Entrega de propuesta de borrador/Delivery of draft proposal	130 days	Mon 01/10/12	Fri 29/03/13
22	Revision de la propuesta borrador/Review of draft proposal	110 days	Mon 01/04/13	Fri 30/08/13
23	Ajustes finales al documento/Final document adjustments	55 days	Mon 02/09/13	Mon 18/11/13
24	Entrega documento final/Delivery of final document	5 days	Mon 18/11/13	Mon 25/11/13
25	**Guia de orientación en apoyo a la implantación ATFM / Guideline in support of ATFM implementation**	**258 days**	**Mon 09/07/12**	**Wed 03/07/13**
26	Collect information/Recolectar información	111 days	Mon 09/07/12	Mon 10/12/12
27	Entrega de propuesta de borrador/Delivery of draft proposal	65 days	Tue 11/12/12	Mon 11/03/13
28	Revision de la propuesta borrador/Review of draft proposal	25 days	Tue 12/03/13	Mon 15/04/13
29	Ajustes finales al documento/Final document adjustments	8 days	Thu 06/06/13	Mon 17/06/13
30	Entrega documento final/Delivery of final document	12 days	Tue 18/06/13	Wed 03/07/13
31	**Guía de orientación para elaborar SIGMET en formato gráfico/Guideline for the drafting of SIGMET in graphic format**	**181 days**	**Mon 06/02/12**	**Tue 16/10/12**
32	Analizar las diversas ventajas que ofrece el uso del SIGMET gráfico/Analyze advantages offered by the use of graphic SIGMET	45 days	Mon 06/02/12	Mon 09/04/12
33	Entrega de propuesta de borrador/Delivery of draft proposal	16 days	Fri 25/05/12	Fri 15/06/12
34	Supervisión o revisiones del plan borrador/Supervision or revisions to draft plan	14 days	Mon 18/06/12	Thu 05/07/12
35	Ajustes finales al documento/Final document adjustments	60 days	Mon 09/07/12	Mon 01/10/12
36	Documento final de la Guía/Final document Guide	11 days	Mon 01/10/12	Tue 16/10/12



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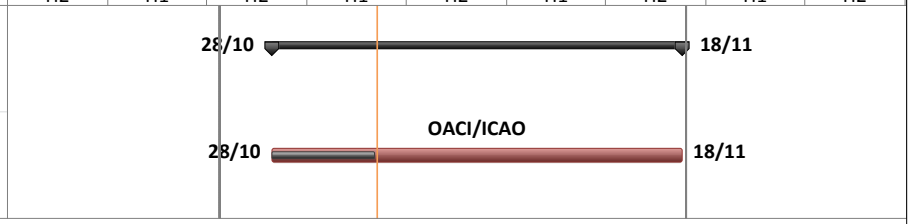
MEJORA A LA COMPRESION SITUACIONAL ATM EN LA REGION SAM / IMPROVE ATM SITUATIONAL AWARENESS IN THE SAM REGION

ID	Nombre de tarea	Duration	Start	Finish
37	**Monitorear las actividades de implantación de la mejora a la comprensión situacional en la Región SAM/Monitor the implementation of improving ATM situational awareness activities in the SAM Region**	**536 days**	**Fri 28/10/11**	**Mon 18/11/13**
38	Monitorear las actividades de implantación de la mejora a la comprensión situacional en la Región SAM/Monitor the implementaion of improving ATM situational awareness activities in the SAM Region	536 days	Fri 28/10/11	Mon 18/11/13



APPENDIX C

GUIDE ON TECHNICAL OPERATIONAL CONSIDERATIONS FOR ADS-B IMPLEMENTATION

INITIAL CONTENTS

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APPENDIX D

GUIDE FOR PRESENTATION OF MET PRODUCTS IN GRAPHIC FORMAT

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