



International Civil Aviation Organization

South American Regional Office

**Seventh Workshop/Meeting of the SAM Implementation Group
(SAM/IG/7) - Regional Project RLA/06/901**

Lima, Peru, 23 to 27 May 2011

SAM/IG/7-WP/11

26/04/11

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

**SUPPORT IN THE OPERATIONAL IMPLEMENTATION OF THE ATM AUTOMATION AND
SITUATIONAL AWARENESS PROJECTS**

(Presented by the Secretariat)

SUMMARY

This working paper presents information on the activities taken under consideration by the CNS/ATM Subgroup with regard to the *ATM automation and situational awareness* Programme and its related projects *ATM automation* and *Improve ATM situational awareness*, which should be analyzed upon by the SAM implementation group for its implementation in the Region.

References:

- Report of the second meeting of the CNS/ATM Subgroup (Mexico City, Mexico, 16-19 November 2010);
- Report of GREPECAS/15 meeting (Rio de Janeiro, Brazil, 13-17 October 2008); and
- Report of GREPECAS/16 meeting (Punta Cana, Dominican Republic, 25-29 April 2011).

ICAO strategic objectives:

*A – Safety; and
C - Environmental protection and
sustainable development of air
transport*

1 Background

1.1 The Communications, Navigation, Surveillance and Air Traffic Management Subgroup (CNS/ATM/SG) was recomposed in follow-up to GREPECAS Decision 15/34, with the aim of ensuring a better coordination on ATM and CNS topics and develop a CAR/SAM performance based planning with views to the implementation of the global ATM concept.

1.2 The CNS/ATM Subgroup was structured in terms of programmes and projects. In this respect, four programmes and nine related projects were identified to the respective programmes.

1.3 The last meeting of the CNS/ATM Subgroup (CNS/ATM/SG/2) defined and approved the work programmes of the projects established during the first meeting of the Subgroup, defining the tasks to carry out by each of the projects, as well as the responsible for their carrying out and target date of the deliverables, as follow-up to Decision CNS/ATM/1-9 – *Review to the work programme of the CNS/ATM Subgroup projects*.

Review to the work programmes of the CNS/ATM Subgroup projects

1.4 GREPECAS/16 meeting proposed a new programme and project-based organization, with the disbanding of the existing Subgroups, the CNS/ATM Subgroup inclusive. With regard to the projects established by the CNS/ATM Subgroup, it was deemed convenient that they were independently implemented: one in the CAR Region and another in the SAM Region, with a project coordinator for the CAR Region and a project coordinator for the SAM Region.

1.5 For the implementation of the *ATM automation and situational awareness* Programme, two related projects have been identified: *ATM automation* and *Improve ATM situational awareness*.

2 Analysis

2.1 The work programmes related with the *ATM automation* and *Improve ATM situational awareness* projects are shown in the **Appendix** to this working paper.

2.2 In this respect, the Meeting should analyze the work programmes with their respective deliverables, nominate a coordinator for each of the above mentioned projects, as well as the experts that would be drafting the tasks defined in the project.

3 Analysis

3.1 The Meeting is invited to:

- a) Take note of the information presented;
- b) Analyze the work programmes of the *ATM automation and situational awareness* Programme projects shown in the Appendix to this working paper;
- c) Nominate the projects coordinators and define the people to carry out the tasks of the projects indicated in the Appendix; and
- d) Analyze any other aspects that the Meeting might deem necessary.

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APPENDIX / APENDICE

PROJECT WORK PROGRAMME / PROGRAMA DE TRABAJO DEL PROYECTO

PROGRAMME/PROGRAMA: ATM AUTOMATION AND SITUATIONAL AWARENESS / AUTOMATIZACION Y COMPRENSION SITUACIONAL ATM

PROJECT/PROYECTO: C1. ATM AUTOMATION / AUTOMATIZACION ATM

PROJECT COORDINATOR/
COORDINADOR DEL PROYECTO:

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/ Entregable
1	2	3	4	5	6
C 1.1	<p>Identify the automation level required according to the ATM service provided in airspace and international aerodromes, assessing</p> <ul style="list-style-type: none"> ○ operational architecture design, ○ characteristics and attributes for interoperability, ○ data bases and software, and ○ technical requirements. <p>Identificar el nivel de automatización requerido de acuerdo con el servicio ATM proporcionado en el espacio aéreo y los aeródromos internacionales, valorando:</p> <ul style="list-style-type: none"> ○ el diseño de la arquitectura operacional, ○ características y atributos para la interfuncionalidad, ○ bases de datos y software, ○ FPL, CPL, CNL, RLA, etc., y ○ Requerimientos técnicos. 	2008 - 2011	<p>ICAO States/Territories</p> <p>OACI Estados/ Territorios</p>	Valid / Válida	<p>Existing level of automation in the SAM Regions/</p> <p>Nivel de automatización existente en la Región SAM</p>
C 1.2	<p>Orientaciones para la elaboración de Memorándum de Entendimiento Interregional para la implantación de la interconexión de sistemas automatizados</p> <p>Guidelines for elaboration of Memorandum of Understanding for the implementation of the automation system interconnection</p>	2010 - 2012	Project C1 / Proyecto C1	Valid / Válida	<p>1. MoU model for the implementation of automation between States.</p> <p>2. Guidelines and considerations for the drafting and agreement on automation/</p> <p>1 Ejemplo de MoU para la implementación de automatizaciones entre Estados</p> <p>2 .Orientaciones y consideraciones para la elaboración y acuerdo para la automatización</p>

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/ Entregable
1	2	3	4	5	6
C 1.3	<p>Monitor the implementation of flight plan data processing system and electronic transmission tools</p> <p>Monitorear la implantación de sistema de proceso de datos de plan de vuelo, herramientas para la transmisión electrónica e intercambio automático de mensajes ATS</p>	2008 - 2012	Project C1 / Proyecto C1	Valid / Válida	<p>Proposals or guidelines for the improvement in the current operation and performance of the flight data plan process and tools for its electronic transmission</p> <p>Propuestas o orientaciones de mejora a la operación y al performance existente relacionados al sistema de proceso de datos de plan de vuelo, herramientas para la transmisión electrónica e intercambio automático de mensajes ATS</p>
C 1.4	<p>Monitor ATM automation implementation and surveillance data exchange</p> <p>Monitorear la implantación de automatización ATM y el intercambio de datos de vigilancia</p>	2008 - 2014	OACI / ICAO	Valid / Válida	
C 1.5	<p>Monitor Implementation of additional/advanced automation support tools to increase aeronautical information sharing</p> <ul style="list-style-type: none"> • ETMS or similar • MET information • AIS/NOTAM dissemination • Surveillance tools to identify airspace sector boundaries • Use of A-SMGC in specific aerodromes, as required <p>Monitorear la implantación de herramientas de apoyo adicionales/avanzadas de automatización para incrementar la compartición de la información aeronáutica</p> <ul style="list-style-type: none"> • ETMS o similar • Información MET • Divulgación AIS/NOTAM • Herramientas de vigilancia para identificar los límites del sector en el espacio aéreo • Uso de A-SMGC en aeródromos específicos, según sea requerido 	2008 - 2014	Project C1 / Proyecto C1	Valid / Válida	<p>Proposals or guidelines for the use and benefits of additional/advanced automation support tools to increase the sharing of aeronautical information.</p> <p>Propuestas o orientaciones para el uso y beneficios de herramientas de apoyo adicionales/avanzadas de automatización para incrementar la compartición de la información aeronáutica</p>
C 1.6	<p>Monitor implementation progress</p> <p>Monitorear el desarrollo de la implementación</p>	2008 - 2014	OACI / ICAO	Valid / Válida	<p>Proposals for the updating of GREPECAS guidelines on ATM systems automation</p> <p>Propuesta de actualización a las directrices de GREPECAS para la automatización de sistemas ATM</p>

PROGRAMME/PROGRAMA:

ATM AUTOMATION AND SITUATIONAL AWARENESS / AUTOMATIZACION Y COMPRENSION SITUACIONAL ATM

PROJECT/PROYECTO:

C2. IMPROVE ATM SITUATIONAL AWARENESS / MEJORA A LA COMPRENSION SITUACIONAL ATM

PROJECT COORDINATOR/

COORDINADOR DEL PROYECTO:

No.	Tarea/Task	Inicio Fin / Start End	Responsible / Responsable	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
C 2.1	Identify parties concerned Identificación de las partes interesadas	2009	GREPECAS	Completed/Finalizada	Identification of parties concerned Identificación de las partes interesadas
C 2.2	Evaluation of surveillance infrastructure and Identification of Surveillance system improvements to support continental en-route and terminal Airspace in CAR/SAM Regions, airspace classification, PBN and the ATFM Evaluación de la infraestructura de vigilancia e identificación de mejoras a los sistemas de vigilancia para apoyar los espacios aéreos en ruta y terminal en las regiones CAR/SAM, la clasificación del espacio aéreo, la PBN y el ATFM	2009-2012	Project C2 / Proyecto C2	Valid/Válida	Revision to Regional surveillance system implementation strategy (surveillance system infrastructure analysis for PBN and ATFM implementation) Revisión a la Estrategia regional para la implantación del sistema de vigilancia (análisis de la infraestructura del sistema de vigilancia para la implantación de PBN y ATFM)
C 2.3	Monitor the implementation of ATM surveillance systems for situational traffic information and associated procedures Monitorear la implantación de sistemas de vigilancia ATM para la información de la situación del tránsito y procedimientos asociados	2010-2015	ICAO/OACI	Valid/Válida	

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
C 2.4	<p>Monitor the implementation of ground and air electronic warnings, as needed</p> <ul style="list-style-type: none"> • Conflict prediction • Terrain proximity • MSAW • DAIW • Surveillance system for surface movement <p>Monitorear la implantación de avisos terrestres y aéreos electrónicos, según sea necesario</p> <ul style="list-style-type: none"> • predicción de conflictos • proximidad en el terreno • MSAW • DAIW • Sistema de vigilancia para el movimiento en la superficie 	2008-2014	Project C2 / Proyecto C2	Valid/Válida	<p>Guidelines for improvement to ground and air electronic warnings/</p> <p>Directrices sobre la mejora de avisos terrestres y aéreos electrónicos</p>
C 2.5	<p>Elaboración de un plan regional para la implantación del ADS- C y ADS B</p> <p>Elaboration of a Regional Plan for the implementation of ADS –C and ADS B</p>	2008-2014	Project C2 / Proyecto C2	Valid/Válida	<p>Guidelines for an operational ADS-B implementation and data exchange (initial steps to the operational implementation of ADS B)/</p> <p>Directrices para la implantación operacional del ADS B y el intercambio de datos (pasos iniciales para la implantación operacional del ADS B)</p>
C 2.6	<p>Monitor the regional activities to optimize the use of radio frequency environment</p> <p>Monitorear las actividades para optimizar el uso del entorno de radio frecuencia</p>	2009/2011	ICAO/OACI	Valid/Válida	