



International Civil Aviation Organization
 CAR/SAM Regional Planning and Implementation Group (GREPECAS)
First Meeting of the Programmes and Projects Review Committee (PPRC/1)
 Mexico City, Mexico, 25 - 27 April 2012

Agenda Item 3: Review of GREPECAS Programmes and Projects

3.7 Projects of the AIM Programme

(Presented by the Secretariat)

SUMMARY	
<p>This paper presents to the Meeting the progress made in the AIM Programme and its Projects G-1, G-2, and G3 of the CAR and SAM Regions. This document provides a strategic framework for a harmonised and integrated evolution and development of Aeronautical Information Management in the States. Likewise, it contributes to the attainment of the future objectives of the operational AIM and supports the implementation of the ICAO ATM global operational concept in coming years.</p>	
REFERENCES	
<ul style="list-style-type: none"> • Report of the Fifteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/15), Rio de Janeiro, Brazil, 13-17 October 2008; • Report of the Sixteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/16), Punta Cana, Dominican Republic, 28 March – 1 April 2011 • Report of the Thirteenth Meeting of the AIM Subgroup (AIM/SG/13) Mexico City, Mexico, 15-19 March 2011 	
ICAO Strategic Objectives:	<p><i>A – Safety</i></p> <p><i>C- Environmental protection and sustainable development of air transport</i></p>

1. Introduction

1.1 The GREPECAS/16 meeting approved the modification of the GREPECAS organisation by replacing the AERMET, AGA/AOP, AIM, and CNS/ATM Subgroups with Programmes and Projects, and formulated the following decisions: **DECISION 16/45 NEW GREPECAS ORGANISATION** and **DECISION 16/47 TRANSFORMATION OF GREPECAS SUBGROUPS**, with a view to the implementation of performance-based regional plans in the CAR and SAM Regions, in compliance with the Global Air Navigation Plan and the Global ATM Operational Concept.

1.2 The thirteenth meeting of the AIM Subgroup approved the projects of the AIM Programme, which contained high-level activities and tasks related to the AIS-to-AIM transition in

accordance with the ICAO AIS-AIM Transition Roadmap, with a view to improving effectiveness, minimising time to deliver results, better coordination between participants and their responsibilities, and applying a project management methodology for cost reduction. Thus, the AIM Programme would be coordinated in the CAR Region by the Officer of the NACC Regional Office, and by the Officer of the SAM Regional Office in the SAM Region.

1.3 GREPECAS/16 considered that, under the AIM Programme, projects G-1, G-2, and G-3 could each be implemented in the CAR Region, in the SAM Region, and, if applicable, in both the CAR and SAM Regions. Thus 3 projects were defined for the CAR Region and 3 for the SAM Region, where experts from CAR States would coordinate projects in the CAR Region, and experts from SAM States would coordinate SAM projects. Based on this separation, although in general the same guidelines and titles were applied to the Programme and projects, project activities were adjusted to the reality of the respective region.

2. Discussion

2.1 The considerable support and interest by CAR and SAM States participating in this GREPECAS methodology is appreciated. However, there are difficulties for the implementation of project activities in both Regions, mainly due to lack of experts. It is expected that this situation will be resolved in the coming months of 2012.

2.2 The AIM programme coordinators of the CAR and SAM Regions have coordinated and exchanged information for harmonisation purposes where required.

AIM Projects in the CAR Region

2.3 At the AIM/SG/13 meeting, the Secretariat defined the allocation of human resources to the AIM Programme, which included a series of AIM tasks to be performed in accordance with the requirements of the GREPECAS programme- and project-based methodology. Accordingly, the meeting designated the coordinators (already ratified by their corresponding administrations) for the projects under the AIM Programme (see **Appendices A1, A2, and A3**) in the CAR Region as follows:

- The delegate of COCESNA, Mr. José Alfredo Santos M., as coordinator of Project G1 – *Provision of electronic terrain and obstacle data (e-TOD) in CAR and SAM States*
- Mexico (DGAC/SENEAM) **declined** to serve as coordinator of Project G2 – *Aeronautical information/data management*
- The delegate of Cuba, Mr. Enrique Echarri C., as coordinator of Project G3 – *Development of quality specifications applicable to the AIM digital environment*

2.4 In the CAR Region, the panels that do the follow-up of the various tasks related to Regional Project RBPANIP are the C/CAR/WG and the CA/ANE/WG, which in March 2012 held their C/CAR//WG/9 and CA/ANE/WG/7 meetings, respectively, at the NACC Regional Office. Together with the NACC/WG, these are the forums for discussion prior to the meetings of Directors of Civil Aviation of the NACC Region, and that will do the follow-up of the projects of the AIM Programme.

Availability of Resources

2.5 In this regard, although State experts have expressed their interest in collaborating as project coordinators and experts, States face serious limitations in terms of human and financial resources. Consequently, the support of Cuba and COCESNA to the work in Projects G-3 and G-1, respectively, has been of great significance.

2.6 It is regretful that Mexico has decided not to participate in the coordination of Project G-2, and that, despite efforts to find a coordinator amongst CAR States, it was not possible to find one. The interest and support of the United States FAA (Mr. George Semples) to this process of Project G-2 are also appreciated.

2.7 It is important to note that, to the extent experts are assigned by the States for project follow-up, their contributions and shared knowledge will represent an important resource for the advancement and implementation of each AIM project.

AIM Projects in the SAM Region

2.8 The SAM/AIM/2 meeting developed the AIM projects for the SAM Region, taking into account the integration of the AIM performance objectives of the Air Navigation Performance-Based Implementation Plan (SAM/AIM 01 and SAM/AIM/2) with the activities carried out by the various task forces of the AIM Subgroup, and the resources available in the SAM Region for furthering these initiatives, as agreed at the last meeting of the Subgroup (AIM/SG/13).

2.9 The SAM/AIM/2 meeting, as part of its action plan, decided to develop the AIM projects taking into account the specific characteristics of SAM States and incorporating tasks as necessary. The AIM projects developed in accordance with the needs in the SAM Region appear in **Appendices B1, B2, and B3** to this working paper.

Availability of resources

2.10 As to available resources, SAM experts expressed their interest in collaborating as project coordinators and experts. However, some participants noted that given the human and economic resource limitations of their Administrations, it would be advisable to secure the respective support of the States to the performance of their tasks.

2.11 During the second half of 2011 and the first quarter of 2012, the AIM coordinators of 3 SAM States (Argentina, Paraguay and Uruguay) were not able to hold the respective Project Management Course and there have been serious budgetary difficulties to attend AIM meetings.

2.12 The SAM/AIM/3 meeting decided to replace the coordinator of Project G3 on the implementation of AIM quality management, so as to prevent a negative impact on the Region and move forward with the project.

ISO 9001:2008 quality certifications

2.13 During the second half of 2011 and the first quarter of 2012, 3 more SAM States have obtained the quality management certification. In total, there are 4 States certified under ISO 9001:2008: Chile, Ecuador, Paraguay, and Brazil. In the case of Brazil, there are still two additional processes pending for full certification. It is expected that two more States will be certified in 2012.

3. Action by GREPECAS

3.1 The CRPP Meeting is invited to:

- a) take note of the information contained in this working paper;
- b) review and consider approving the projects contained in **Appendices A and B** to this working paper; and
- c) take action as it may deem appropriate.

APPENDIX A1

PROJECT DP N° G1 – CAR

CAR Region	PROJECT DESCRIPTION (DP)	DP N° G1	
<i>Programme</i>	Title of the Project	Start	End
AIM (ICAO programme coordinator: Raúl Martínez)	Provision of electronic terrain and obstacle data (e-TOD) (CAR) Project coordinator: Alfredo Santos Mondragón (COCESNA) Experts contributing to the project: CAR/AIM	26/09/11	31/12/15
Objective	Support geographic information system (GIS) management, providing support material to CAR States for the provision of e-TOD data.		
Scope	The project contemplates the assessment and identification of the status of implementation of the provision of electronic terrain and obstacle data. It contemplates the drafting of an Action Plan and the adoption of Spanish and English e-TOD implementation guides, and support to the provision of electronic obstacle data with a view to the evolution of digital terrain models (DTM) for gradually improving electronic aeronautical charts and other similar products with the support of tools such as those currently provided by geographic information system (GIS)		
Metrics	Number of States with an operational GIS and trained personnel. Number of States that have implemented an eTOD action plan. Number of States with SLAs.		

Strategy	<p>All project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“Go-To-Meeting” application) and meetings to be held from time to time in accordance with work programme activities. The project coordinator will coordinate with the programme coordinator for the inclusion of additional experts suggested by the States in accordance with the tasks and work to be carried out.</p> <p>The results will be submitted by the programme coordinator to State experts in the form of a consolidated document for their analysis, review, and approval, and for presentation to the GREPECAS CRPP.</p>				
Rationale	<p>In order to comply with the SARPs of Annexes 15 and 4 that facilitate performance-based air operations and the implementation of the AIS-AIM Transition Roadmap, a close relationship is required with other projects in order to identify their operational requirements and their tentative implementation dates.</p>				
Related projects	<p>Project AIM G1 “Provision of electronic terrain and obstacle data (eTOD) (CAR)” is related to Projects G2 “ Aeronautical information/data management” and G3 “Assessment and development of QMS applied to AIM in SAM States”</p>				
Project deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation*	Date of Delivery	Comments
Updated status of implementation of eTOD in the CAR Region.	PFF: CAR AIM/02	Raúl Martínez		31/07/12	Follow-up to CA/ANE/WG/7 and C/CAR/WG/9 meeting reports
Generate a report on eTOD implementation in the CAR Region.	PFF: CAR AIM/02	Raúl Martínez		31/08/12	Under way as scheduled.

Adjust the Manual on obstacle and terrain data for the CAR Region	PFF: CAR AIM/02	Raúl Martínez and Alfredo S. Mondragón (COCESNA)		31/08/12	Under way as scheduled.
Define the technical specifications of a model action plan and the eTOD project.	PFF: CAR AIM/02	Raúl Martínez and Alfredo S. Mondragón (COCESNA)		23/11/12	Foreseen to start on 03/09/12
General guidance material for the implementation of an AIM geographic information system (GIS).	PFF: CAR AIM/01	Raúl Martínez		2011	Completed as scheduled in compliance with GREPECAS Conclusion 14/39
Promote eTOD training and documentation for AIM operators.	PFF: SAM AIM/02	Raúl Martínez		23/07/12	Seminar on the transition to AIM, Phases 1 to 3, eTOD, AIXM, GIS
Resources needed	Designation of experts for the implementation of some deliverables. Higher level of commitment by States to support coordinators and experts.				

Status of implementation*

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

Timetable in MS Project showing tasks, sub-tasks, deliverables, and responsible party

**GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
DESARROLLOS PARA EL SUMINISTRO DE LOS DATOS ELECTRÓNICOS SOBRE EL TERRENO Y LOS OBSTÁCULOS (E-TOD) (CAR)**

ID	Nombre de tarea	Duration	2011			2012			2013			2014			2015			2016		
			Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
1	Desarrollos para el suministro de los datos electrónicos sobre el terreno y los obstáculos (e-TOD) (CAR). Development for the provision of electronic terrain and obstacle database (e-TOD) (CAR)	1114 days?																		
2	Actualización sobre estado de implantación eTOD en la Región CAR. Updating on the status of e-TOD implementation in the CAR Region.	103 days?																		
3	Generar Informe de Implantación E-TOD en la Región CAR. Generate e-TOD implementation report in the CAR Region.	23 days?																		
4	Adaptar Manual de Datos de obstáculos y terreno para Región CAR. Adjust the e-TOD Manual to the CAR Region.	110 days?																		
5	Definir las especificaciones técnicas de un modelo de Plan de acción y del proyecto eTOD. Define technical specifications of an action plan and e-TOD model.	60 days?																		
6	Material Guía general para la implementación de u	59 days?																		
7	Promover capacitación y la documentación para operadores AIM en e-TOD. Foster training and documentation for e-TOD AIM operators.	136 days?																		
8	Seguimiento a los desarrollos para el suministro de	1114 days?																		
9	Dar seguimiento a los desarrollos para el suministro	1114 days?																		

APPENDIX A2**PROJECT DP N° G2 – CAR**

CAR Region	PROJECT DESCRIPTION (DP)	DP N° G2	
Programme	Title of the Project	Start	End
AIM (ICAO programme coordinator: Raúl Martínez)	G2: Aeronautical information/data management (CAR) Project coordinator: Mexico declined to participate No coordinator. Experts contributing to the project: None.	Dec. 2012	TBD
Objective	Prepare an action plan to be followed by States for the implementation of the aeronautical information/data exchange model, and prepare a model letter of agreement between States.		
Scope	The project contemplates the assessment and identification within the States of the level of automation required for the integration of the aeronautical information and data exchange model in the region, through surveys, the identification of data base providers, and follow-up of the progress made in the associated SARPs.		
Metrics	Number of States with an aeronautical information and data exchange model implemented. Number of States that have SLAs with other States.		

Strategy	Project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“GoToMeeting” application). Seminars/meetings are scheduled in accordance with the activities of the work programme. The project coordinator will coordinate with the programme coordinator the inclusion of additional experts if needed for the tasks and work to be done. The results of the work done will be submitted by the programme coordinator to State experts in the form of a final consolidation document for their analysis, review and approval, and for submission to the GREPECAS CRPP.				
Rationale	Integrate aeronautical information to achieve the interoperability of aeronautical information systems, mainly ATM, and other users, while safeguarding air navigation safety (PAX-operators), by implementing the aeronautical information exchange model (AIXM) in preparation for the SWIM concept of Block 30 and Block 31 (ASBU) amongst other SWIM-related Blocks.				
Related projects	It is related to Projects G1 “Provision of electronic terrain and obstacle data (e-TOD)” and G3 “Assessment and development of the QMS applied to AIM in the CAR Region”, electronic aeronautical charts (eMAP), eAIP, digital NOTAM, PBN, FMS databases, etc.				
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation*	Date of Delivery	Comments
Prepare a workshop on the AIXM concept. See 5.1	PFF: CAR AIM/02	No coordinator		TBD	Foreseen to start in Dec. 2012
Survey of AIXM agreements implemented in the region	PFF: CAR AIM/02	No coordinator		TBD	Foreseen to start in Dec. 2012
Development of the model-template of AIXM agreement between States	PFF: CAR AIM/02	No coordinator		TBD	Foreseen to start in Dec. 2012

Survey of the provision of the IAIP using a table	PFF: CAR AIM/02	ICAO coordinator		TBD	No information available
Collection of information on the electronic AIP in CAR States	PFF: CAR AIM/02	ICAO coordinator		TBD	No information available
Preparation of a table in the electronic IAIP on issues not contemplated in the AIXM model	PFF: CAR AIM/02	No coordinator		TBD	Foreseen to start in Dec. 2012
Establish the procedure and protocols to ensure harmonisation among States and Regions	PFF: CAR AIM/02	No coordinator		TBD	Foreseen to start in Dec. 2012
Resources needed	Designation of the coordinator and experts to work on the deliverables. Greater commitment by CAR States to support coordinators and experts.				

- **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*

Timetable in MS Project listing tasks, sub-tasks, deliverables, and responsible parties

**GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
GESTION DE INFORMACION/DATOS AERONAUTICOS / AERONAUTICAL INFORMATION MANAGEMENT**

ID	Nombre de tarea	Duration	2011			2014				
			Qtr 4	Qtr 3	Qtr 2	Qtr 1	Qtr 4	Qtr 3	Qtr 2	
17	<New Summary Task>	0 days?								
18	<New Task>	1 day								◆ 14/03 11/03 14/03

APPENDIX B1

PROJECT DP N° G1 – SAM

SAM Region	PROJECT DESCRIPTION (DP)	DP N° G1	
<i>Programme</i>	Title of the Project	Start	End
<i>AIM</i> (ICAO Programme Coordinator: Roberto Arca Jaurena)	Provision of electronic terrain and obstacle data (e-TOD) (SAM) Project coordinator: Juan González (Uruguay) Experts contributing to the project: SAM/AIM IG	26/09/11	31/12/15
Objective	Support the implementation of e-TOD data provision by SAM States and provide guidance to the States for the acquisition and management of a GIS.		
Scope	The project contemplates the assessment and identification of the status of implementation related to the provision of electronic terrain and obstacle data. It contemplates the drafting of an action plan and guidance for e-TOD implementation in support of the provision of electronic terrain and obstacle data with a view to the evolution of digital terrain models (DTM) for gradual improvement of electronic aeronautical charts and other similar products with the support of tools such as geographic information systems (GIS).		
Metrics	Number of States with a GIS purchased and operational. Number of experts trained in GIS. Number of States with an e-TOD plan of action implemented. Number of States with SLAs.		

Strategy	<p>All project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“Go-To-Meeting” application) and meetings to be held from time to time in accordance with work programme activities. The project coordinator will coordinate with the programme coordinator the inclusion of additional experts suggested by the States when so required by the tasks and work to be carried out.</p> <p>The results will be submitted by the programme coordinator to the State experts in the form of a consolidated document for their analysis, review, and approval, and for submission to the GREPECAS CRPP.</p>				
Rationale	<p>Compliance with the SARPs of Annexes 15 and 4 to facilitate performance-based air operations and the implementation of the AIS-AIM Transition Roadmap. Close relationship with other projects is required in order to identify their operational requirements and tentative implementation dates.</p>				
Related projects	<p>Project G2 “ Aeronautical information/data management” and Project G3 “Assessment and development of the QMS applied to AIM in SAM States”</p>				
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation*	Date of Delivery	Comments
Questionnaire on the status of implementation of e-TOD	PFF: SAM AIM/02	Juan González Uruguay		30/11/11	Completed as scheduled.
Prepare e-TOD implementation report.	PFF: SAM AIM/02	Juan González Uruguay		30/04/12	Being implemented as scheduled.

Draft the guiding document containing the objectives of the e-TOD project.	PFF: SAM AIM/02	Juan González Uruguay		31/08/12	Foreseen to start on 11/06/12
Define the technical specifications of the e-TOD project.	PFF: SAM AIM/02	Juan González Uruguay		23/11/12	Foreseen to start on 3/09/12
Draft the document containing e-TOD technical specifications.	PFF: SAM AIM/02	Juan González Uruguay		10/01/13	Foreseen to start on 30/11/12
Develop a training programme and documentation for e-TOD operators.	PFF: SAM AIM/02	TBD		26/08/12	No expert has been designated for this activity. Foreseen to start on 01/08/12
Compile the required operational concepts in a document.	PFF: SAM AIM/02	TBD		02/11/12	No expert has been designated for this activity. Foreseen to start on 04/09/12
Prepare the financial documentation.	PFF: SAM AIM/02	TBD		02/05/13	No expert has been designated for this activity. Foreseen to start on 02/05/13
Guidance for the acquisition of a geographic information system (GIS)	PFF: SAM AIM/01	Juan González Uruguay		09/03/12	Completed as scheduled.
GIS Implementation Manual	PFF: SAM AIM/01	Juan González Uruguay		09/03/12	Completed as scheduled.
Develop a training programme and documentation for GIS/AIXM operators.	PFF: SAM AIM/01	TBD		17/10/12	No expert has ben designated for this activity. Foreseen to start on 01/08/12
Define GIS operational concepts.	PFF: SAM AIM/01	TBD		28/02/13	No expert has ben designated for this activity. Foreseen to start on 28/02/13
Compile the required GIS operational concepts in a document.	PFF: SAM AIM/01	TBD		29/08/13	No expert has ben designated for this activity. Foreseen to start on 01/07/13

Resources needed	Designation of experts for the implementation of some deliverables. Greater commitment by States to support coordinators and experts.				

- **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*

Timetable in MS Project with tasks, sub-tasks, deliverables, and responsible parties

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
SUMINISTRO DE DATOS ELECTRÓNICOS SOBRE TERRENO Y OBSTÁCULOS (E-TOD) + GIS / PROVISION OF TERRAIN AND OBSTACLE ELECTRONIC DATA (E-TOD) + GIS

ID	Nombre de tarea	Duration	2010			2012			2014			20
			Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	
1	Desarrollos para el suministro de los datos electrónicos sobre el terreno y los obstáculos (e-TOD) en los Estados SAM + GIS/Development for the provision of terrain and obstacle electronic data (e-TOD) in SAM States + GIS	1304 days										
2	Identificar el nivel de implantación de la Norma para la provisión de datos electrónicos sobre el terreno (e-TOD) para el Área 1 (Anexo 15, 10.1.3)/Identify the level of implementation of the Regulation for the provision of electronic terrain data (e-TOD)	118 days										
3	Generar Formulario de Consulta/Generate survey form	10 days										
4	Circular a los Estados/Circulate to States	7 days										
5	Reunir información de los Estados/Gather information from States	12 days										
6	Generar Informe de Implantación/Generate implementation report	64 days										
7	Plan de acción e-TOD/e-TOD action plan	1304 days										
8	Objetivos/Objectives	89 days										
9	Establecer y priorizar objetivos del proyecto de implantación del e-TOD (tareas, costos, plazos de ejecución, riesgos del proyecto)/Establish and prioritise objectives of e-TOD implementation project (tasks, costs, impl. Target dates, project risks)	30 days										
10	Elaborar el Documento Guía con los objetivos del proyecto/Prepare guidance document with project objectives	59 days										
11	Especificaciones técnicas/Technical specifications	94 days										
12	Definir las especificaciones técnicas y del proyecto/Define technical specifications of the project	60 days										
13	Elaborar el documento con las especificaciones técnicas/Prepare the document with technical specifications	30 days										
14	Realizar Acuerdos/Carry out agreements	90 days										
15	Definir cláusulas contractuales para el uso de la información (protección, almacenamiento, distribución, etc)/Define contract clauses for use of information, storage, distribution, etc)	30 days										
16	Firmar cartas de acuerdos, socializando los datos electrónicos de terreno y de obstáculos en las áreas comunes entre las fronteras de los Estados/Sign LOAs socialising e-TOD in common areas between States' boundaries	50 days										
17	Firmar acuerdo de nivel de servicio (SLA) entre proveedores y servicio AIS/Sign service agreement - SLA between providers and AIS service	31 days										
18	Capacitación/Training	1304 days										

**GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
SUMINISTRO DE DATOS ELECTRÓNICOS SOBRE TERRENO Y OBSTÁCULOS (E-TOD) + GIS / PROVISION OF TERRAIN AND OBSTACLE ELECTRONIC DATA (E-TOD) + GIS**

ID	Nombre de tarea	Duration	2010			2012			2014			20
			Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	
19	Desarrollar un programa de capacitación y la documentación para operadores de e-TOD/Develop training programme and documentation for e-TOD operators	20 days					TBD					
20	Conducir programas de capacitación/Conduct training programmes	40 days			TBD							
21	Realizar seminarios orientados a los especialistas e-TOD, indicando los planes y los beneficios operacionales y económicos esperados/Hold seminars oriented towards e-TOD experts, indicating plans and operational and economical benefits expected.	941 days										Coordinador OACI
22	Conceptos Operacionales/Operational concepts	111 days										
23	Definir los conceptos operacionales/Define operational concepts	67 days										
24	Compilar en un documento los conceptos operacionales necesarios/Compile in a document necessary operational concepts	44 days										
25	Análisis de requerimientos tecnológicos / Technological requirements analysis	146 days										
26	Evaluación de costos del proyecto en general/General project cost assessment	87 days										
27	Elaborar la documentación financiera/Draft financial documentation	44 days										
28	Presentar a la alta gerencia del documento final para su aprobación/Present the High Level Management the final document for approval	13 days										Estados
29	Adquisición de herramientas tecnológicas/Acquisition of technological tools	326 days										
30	Adquirir los software, hardware y aplicativos de última tecnología/Acquire software and hardware and applications of state-of-the-art technology	152 days										Estados
31	Instalar y poner en funcionamiento de las herramientas tecnológicas adquiridas/Install and put into operation technology tools acquired	132 days										Estados
32	Entrenar al personal especializado en el manejo de estas herramientas/Train specialised personnel in handling these tools	43 days										Estados
33	Implantación propiamente dicha (bajo GIS)/Implementation itself (under GIS)	261 days										
34	Carga de datos>Loading of data	150 days										Estados
35	Verificación de carga/Check data loading	100 days										Estados
36	Análisis de resultados/Analysis of the results	11 days										Estados
37												
38	Desarrollo del GIS en Estados SAM para gestión de datos e-TOD, y gestionar info requerida para apoyar aplicaciones de nav aérea definidas/Development of GIS in SAM States for e-TOD and manage info required to support air nav applications	1170 days										
39	Diagnóstico/Diagnosis	224 days										

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
SUMINISTRO DE DATOS ELECTRÓNICOS SOBRE TERRENO Y OBSTÁCULOS (E-TOD) + GIS / PROVISION OF TERRAIN AND OBSTACLE ELECTRONIC DATA (E-TOD) + GIS

ID	Nombre de tarea	Duration	2010			2012			2014			20
			Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	
40	Evaluación: costo beneficio, personal especializado, equipamiento de hardware y software/Cost-benefit assessment, specialised personnel, hardware and software	43 days										
41	Guía para la adquisición de un sistema de información geográfica/Guidance material for acquisition of a GIS	50 days										
42	Manual Guía Implantación de un GIS/Guidance for GIS implementation	50 days										
43	Selección y adquisición de software y hardware más adecuado/Selection and acquisition of most adequate software	174 days										
44	Realizar Acuerdos/Carry out agreements	100 days										
45	Definir cláusulas contractuales para uso de información (protección, almacenamiento, distribución, etc)/Define contracting clauses for use of information (protection, storage, distribution, etc)	30 days										
46	Firmar cartas de acuerdos, socializando los datos electrónicos de terreno y de obstáculos en las áreas comunes entre las fronteras de los Estados/Sign LOAs socialising e-TOD in common areas between States' boundaries	50 days										
47	Firmar acuerdo de nivel de servicio (SLA) entre proveedores y servicio AIS/Sign service level agreement - SLA, between AIS service providers	20 days										
48	Capacitación/Training	253 days										
49	Desarrollar un programa de capacitación y documentación para operadores de GIS + AIXM/Develop a training programme and documentation for operators of GIS + AIXM	56 days										
50	Conducir programas de capacitación/Conduct training programmes	40 days										
51	Realizar seminarios orientados a los especialistas e-TOD, indicando los planes y los beneficios operacionales y económicos esperados/Make seminars oriented to e-TOD experts indicating plans and operational and economic benefits expected	200 days										
52	Conceptos Operacionales/operational concepts	650 days										
53	Definir los conceptos operacionales/Define operational concepts	87 days										
54	Compilar en un documento los conceptos operacionales necesarios/Compile in one document necesario operational concepts	44 days										
55	Generar base de datos/Generation of data bases	402 days										
56	Definición de bases de datos/Definition of data bases	100 days										
57	Carga de datos/Data loading	150 days										
58	Verificación de carga/Check data loading	100 days										
59	Análisis de resultados/Analysis of results	11 days										
60	Generación AIXM/AIXM Generation	40 days										
61	Generar productos basados en AIXM/Generate AIXM-baed products	40 days										

SAM Region	PROJECT DESCRIPTION (DP)	DP N° G2	
<i>Programme</i>	Title of the Project	Start	End
<p><i>AIM</i></p> <p>(ICAO Programme Coordinator: Roberto Arca Jaurena)</p>	<p>G2: Aeronautical information/data management (SAM)</p> <p>Project coordinator: Pablo Collazo (Argentina)</p> <p>Experts contributing to the project: SAM/AIM IG</p>	01/03/12	01/05/13
Objective	Prepare the action plan to be followed by States for the use of the aeronautical information/data exchange model, letter of agreement model, and validation guides by mid 2013.		
Scope	The project contemplates the assessment and identification of the status of implementation associated to the integration of the aeronautical information/data exchange model in the Region by means of surveys, the identification of database providers, and the follow-up of the implementation of SARPs on this matter.		
Metrics	<p>Number of States that have implemented data exchange systems.</p> <p>Number of States with SLAs.</p>		
Strategy	<p>All project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“Go-To-Meeting” application) and meetings to be held from time to time in accordance with work programme activities. The project coordinator will coordinate with the programme coordinator the inclusion of additional experts suggested by the States if so required by the tasks and work to be carried out.</p> <p>The results will be submitted by the programme coordinator to the State experts in the form of a consolidated document for their analysis, review, and approval, and for submission to the GREPECAS CRPP.</p>		

Rationale	Integrate aeronautical information systems for the purpose of ATM system interoperability, while safeguarding safety (PAX-operators), by applying information exchange models.				
Related projects	This project is related to Projects G1 “ Provision of electronic terrain and obstacle (e-TOD) data” and G3 “Assessment and development of the AIM QMS in SAM States”				
Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of Implementation*	Date of delivery	Comments
Prepare guidance material on the concept	PFF: SAM AIM/02	Pablo Collazo Argentina		07/09/12	Foreseen to start on 01/06/12
Survey on agreements implemented in the Region	PFF: SAM AIM/02	Pablo Collazo Argentina		31/08/12	Foreseen to start on 01/05/12
Agreement model-template	PFF: SAM AIM/02	Pablo Collazo Argentina		26/12/12	Foreseen to start on 01/11/12
Survey on the provision of the IAIP using a table.	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Completed as scheduled at the SAM/AIM/IG meeting
Distribution of IAIP survey to States	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Completed as scheduled at the SAM/AIM/IG meeting

Collection and updating	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Completed as scheduled at the SAM/AIM/IG meeting
Compilation of experiences on the electronic AIP in SAM States	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Completed as scheduled at the SAM/AIM/IG meeting
Review, and consider the adoption of, the corresponding specifications developed by Eurocontrol	PFF: SAM AIM/02	Pablo Collazo Argentina		01/06/12	
Prepare guidance material	PFF: SAM AIM/02	Pablo Collazo Argentina		03/12/12	Foreseen to start on 01/06/12
Prepare a table covering issues not included in the AIP model	PFF: SAM AIM/02	Pablo Collazo Argentina		03/12/12	Foreseen to start on 03/09/12
Establish a procedure to ensure harmonisation	PFF: SAM AIM/02	Pablo Collazo Argentina		30/11/12	Foreseen to start on 28/09/12
Resources needed	Designation of experts for the implementation of some deliverables. Greater commitment by States to support coordinators and experts.				

**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

Timetable in MS Project showing tasks, sub-tasks, deliverables, and responsible parties

**GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
GESTION DE INFORMACION/DATOS AERONAUTICOS / AERONAUTICAL INFORMATION/DATA MANAGEMENT**



ID	Nombre de tarea	Duration	2011				2012				2013				2014				Q1
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
1	Gestión de información/datos aeronáuticos/Aeronautical Information/data Management	344 days																	
2	Modelo de Intercambio de Información Aeronáutica (AIXM)/Aeronautical Information Exchange Management (AIXM)	218 days																	
3	Dar seguimiento al desarrollo los SARPs de la OACI sobre el modelo de intercambio de información aeronáutica/Give follow-up to the development of ICAO SARPs on the aeronautical information exchange model	218 days																	
4	Elaborar material guía acerca del concepto/Prepare guidance material about the concept	71 days																	
5	Distribuir Guía a los Estados/ Guidance distribution to States	22 days																	
6	Acuerdos con proveedores de datos/Agreements with data providers	172 days																	
7	Relevar los acuerdos implantados en la región/Review agreements implemented in the region	89 days																	
8	Desarrollar material guía/Develop guidance material	128 days																	
9	Identificación de originadores/Identify originators	88 days																	
10	Modelo-Plantilla de acuerdo/Model, agreement pattern	40 days																	
11	Identificar el estado de implantación sobre el suministro de Documentación Integrada IAI/Identify status of implementation on the provision of integrated AIP documentation	263 days																	
12	Relevamiento de suministro de la IAIP mediante el uso de una tabla/Collection of IAIP provision through the use of a table	51 days																	
13	Distribución a los Estados/Distribution to States	51 days																	
14	Recolección y Actualización/Collection and updating	29 days																	
15	AIP Electrónico/Electronic AIP	244 days																	
16	Recolección de experiencias en los Estados de la Región SAM/Collection of experiences in the SAM Region States	32 days																	

**GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
GESTION DE INFORMACION/DATOS AERONAUTICOS / AERONAUTICAL INFORMATION/DATA MANAGEMENT**

ID	Nombre de tarea	Duration	2011				2012				2013				2014				
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
17	Estudiar para su incorporación especificaciones relativas elaboradas por Eurocontrol/Study for its incorporation into relative specifications prepared by Eurocontrol	87 days																	
18	Elaboración de material guía/Drafting of guidance material	132 days																	
19	Distribución a los Estados/Distribution to States/Distribution to States	6 days																	
20	Armonizar en la Región SAM la introducción de información no contemplada en el modelo AIP/Harmonise in the SAM Region the introduction of information not contemplated in the AIP model	173 days																	
21	Elaboración de una tabla conteniendo temas no contemplados en el modelo AIP/Drafting of a table containing issues not contemplated in the AIP model	66 days																	
22	Establecer un formulario de comunicación de inclusión de temas no contemplados/Establish a communication form for inclusion of matters not contemplated	46 days																	
23	Establecer el procedimiento para asegurar la armonización/Establish procedure to ensure harmonisation	108 days																	

APPENDIX B3
PROJECT DP N° G3 – SAM

SAM Region	PROJECT DESCRIPTION (DP)	DP N° G3	
<i>Programme</i>	Title of the Project	Start	End
<i>AIM</i> (ICAO programme coordinator: Roberto Arca Jaurena)	<p style="text-align: center;">Assessment and development of the QMS in the AIM environment in SAM States</p> <p>Project coordinator: Oscar Dioses (Peru)</p> <p>Experts contributing to the project: Lidia Cáceres (Peru) SAM/AIM IG David Díaz (Peru)</p>	03/10/11	31/12/12
Objective	Support the introduction of improvements to the guides on the quality management system in the digital/electronic environment of AIM in the SAM Region, based on regional performance objectives of the regional performance-based implementation plan for the SAM Region.		
Scope	The project contemplates the assessment and identification of the status of implementation associated to quality management in AIM services in the Region. Drafting of an action plan and guides on the implementation of QMS in the digital/electronic environment of AIM.		
Metrics	Number of States with an ISO 9001:2008-certified QMS		

<p>Strategy</p>	<p>Project activities will be coordinated amongst project members, the project coordinator, and the programme coordinator, mainly through teleconferences (“Go-To-Meeting” application) and meetings to be held from time to time in accordance with work programme activities. The project coordinator will coordinate with the programme coordinator the inclusion of additional experts suggested by the states if so required by the tasks and work to be carried out. The results will be submitted by the programme coordinator to the State experts in the form of a consolidated document for their analysis, review, and approval, and for submission to the GREPECAS CRPP.</p>				
<p>Rationale</p>	<p>The quality management system in AIM services must give users the assurance and confidence that the distributed aeronautical information/data meets quality requirements in terms of accuracy, resolution, and integrity. A close relationship with other projects is necessary in order to identify their operational requirements and their respective tentative implementation dates.</p>				
<p>Related projects</p>	<p>Project G1 “Provision of electronic terrain and obstacle data e-TOD” and Project G2 “ Aeronautical information/data management”</p>				
<p>Project deliverables</p>	<p>Relationship with the regional performance-based plan (PFF)</p>	<p>Responsible Party</p>	<p>Status of Implementation*</p>	<p>Date of Delivery</p>	<p>Comments</p>
<p>Prepare surveys on the status of compliance and implementation of the AIM QMS based on ICAO guides</p>	<p>PFF: SAM AIM/01</p>	<p>ICAO coordinator</p>		<p>25/11/11</p>	<p>Completed as scheduled.</p>
<p>Circulate surveys to the States</p>	<p>PFF: SAM AIM/01</p>	<p>ICAO coordinator</p>		<p>17/02/12</p>	<p>Completed as scheduled.</p>

Collect and tabulate information of States	PFF: SAM AIM/01	ICAO coordinator		13/04/12	Completed on 30/03/12.
Describe the steps towards QMS implementation	PFF: SAM AIM/01	SAM/AIM/WG		30/03/12	Completed as scheduled.
Questionnaire on QMS self-assessment	PFF: SAM AIM/01	David Diaz Peru		30/03/12	Completed as scheduled.
Template containing QMS assessment results	PFF: SAM AIM/01	David Diaz Peru		30/03/12	Completed as scheduled.
Prepare implementation report	PFF: SAM AIM/01	ICAO coordinator Oscar Dioses Peru		31/05/12	Will be completed as scheduled
QMS action plan	PFF: SAM AIM/01	Oscar Dioses Peru		24/08/12	Estimated to be completed as scheduled. Project deliverables may vary once the action plan is defined.
Model letter of agreement between States and service providers to ensure the quality of information and AIM data exchange.	PFF: SAM AIM/01	TBD		09/08/12	Start-up date 04/06/12. This task could be delayed because of lack of an expert. It is expected that a solution will be found before the start-up date.
Collect information on certifications and prepare report on status of ISO 9001:2008 certification in the SAM Region	PFF: SAM AIM/01	ICAO coordinator		30/11/12	Foreseen to be completed as scheduled.
Resources needed	Designation of experts for the implementation of some deliverables. Greater commitment by States to support coordinators and experts.				

- *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*

Timetable in MS Project showing tasks, sub-tasks, deliverables, and responsible parties

GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION / CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP (GREPECAS)
EVALUACION Y DESARROLLO QMS APLICADO A LA AIM EN LA REGION SAM / EVALUATION AND DEVELOPMENT OF QMS APPLIED TO AIM IN THE SAM REGION

