



International Civil Aviation Organization

CAR/SAM Regional Planning and Implementation Group (GREPECAS)

**Second Meeting of the Programmes and Projects Review Committee (PPRC/2)**

(Lima, Peru, 16-18 July 2013)

PPRC/2 - WP/13

11/06/13

### **Agenda Item 3: Review of the GREPECAS Programmes and Projects**

#### **3.6 Projects of the AIM Programme**

**PROJECTS G1 “IMPLEMENTATION OF THE PROVISION OF ELECTRONIC TERRAIN AND OBSTACLE DATA (E-TOD)”, G2 “IMPLEMENTATION OF AERONAUTICAL INFORMATION EXCHANGE SYSTEMS” (AIXM), AND G3 “IMPLEMENTATION OF THE QUALITY MANAGEMENT SYSTEM IN AIM UNITS” OF THE CAR AND SAM REGIONS**

(Presented by the Secretariat)

#### **SUMMARY**

This paper presents the progress made in the AIM Programme and its Projects G1 “Implementation of the provision of electronic terrain and obstacle data (e-TOD)”, G2 “Implementation of aeronautical information exchange systems (AIXM)”, and G3 “Implementation of the quality management system in AIM units” of the CAR and SAM Regions.

#### **REFERENCES**

- Report of the First Meeting of the Programmes and Projects Review Committee (PPRC/1) (Mexico City, Mexico, 25-27 April 2012)
- Report of the SAM/AIM/3 (Lima, 12-16 March 2012) and SAM/AIM/4 (Lima, 15-19 October 2012) meetings

*ICAO Strategic  
Objectives*

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

## **1. Introduction**

1.1 The PPRC/1 took note of the work and progress made by the AIM Programme through the projects executed by the coordinators of each Project (G1, G2, and G3). It also took note of the difficulties encountered by the coordinators in both regions during this implementation period.

1.2 The Secretariat emphasised the need for all CAR and SAM States to participate in the work of the various projects concerning aeronautical information management (AIM), and highlighted that target dates had been set for the implementation tasks that would enable the development of AIM. In this regard, it noted that the Civil Aviation Authorities of the States of the Regions had provided very little support during the transition stage to the AIM.

## 2. Discussion

### *Projects of the AIM Programme in the CAR Region*

2.1 Regarding the AIM Programme, which included a number of tasks to be performed in accordance with the requirements of the ICAO AIS-to-AIM transition Roadmap and of the GREPECAS methodology based on programmes and projects for the CAR Region, with their respective Coordinators (ratified by their corresponding Administration), there is an unfortunate lack of participation by the States in the three projects defined for this programme, especially by the Coordinators of Cuba and Mexico, who had not participated in any of the tasks of this phase of the AIM projects (listed in **Appendices A1, A2, and A3**), as shown below:

- The Coordinator of COCESNA, Mr. José Alfredo Santos M., submitted the task he had been entrusted with under Project G1 – *“Developments for the provision of electronic terrain and obstacle data (e-TOD) in the States”*.
- The Coordinator of Mexico, DGAC/SENEAM, Mr. J. Martin Fuentes M., would provide information on the progress made in Project G2 – *“Aeronautical information/data management”*, without participating in any of the Project tasks.
- The Coordinator of Cuba, ECCASA, Mr. Enrique Echarri C., would provide information on the progress made in Project G3 – *“Development of quality specifications applicable to the digital AIM environment”*, without participating in any of the Project tasks.

2.2 Taking into account the commitment made by States at the GREPECAS/16 meeting (Punta Cana, Dominican Republic, 28 March to 1 April 2011) regarding the availability of human and financial resources, and despite the interest they had expressed at the Plenary Meeting to cooperate in the different tasks related to these projects, no official document was received from the States concerning the assignment of experts.

2.3 It is also unfortunate that the coordinators of Cuba and Mexico did not participate despite they had stated that they would participate as Coordinators for Projects G2 and G3, respectively, so it was not possible to get their support for this GREPECAS process.

2.3 It is important to highlight that, in the near future, only to the extent Coordinators and State experts are assigned to participate in a committed and responsible manner in project follow-up, will it be possible to take advantage of their contribution and knowledge to further and implement each project and provide AIM benefits to the States.

2.4 **Project G1 – “Developments for the provision of electronic terrain and obstacle data (e-TOD) in the States”**, concluded with a guide in Spanish for e-TOD implementation (for which there is also an English version), based on an EUROCONTROL document, to serve as reference for implementation, providing useful elements for the formulation of an action plan, *inter alia*. In general, the States of the Region have not officially submitted to the ICAO NACC Office any developments on this issue, partly due to lack of guides in Spanish for Spanish-speaking States.

2.5 In 2012, most States (18) had an automated system in place or in the process of implementation, whether their own or through an official agreement with COCESNA, CEPA or PIARCO, as applicable. These organisations have also implemented geographical information systems (GIS), with

the exception of CEPA, which already has a GIS implementation action plan. To date, Haiti, Bahamas, and Jamaica have not reported any progress in the implementation of an automated system. It should be noted that, in the case of Bahamas, it has a contract with the company SATNAV for the automated production of the AIP, including IAIP amendments. In the case of Haiti, it is known that, although it has an action plan, it has not been implemented yet. Finally, Jamaica also has an action plan, but funds are being sought for its implementation.

### Analysis of the achievement of goals, based on G1 indicators/metrics, as a platform for the future implementation of e-TOD

- Percentage of States with GIS or automated systems implemented.
- Percentage of States with a Guide-Document and an action plan approved.
- Percentage of States with SLAs

2012 and 2013 State (UN Code)	% of States with automated or GIS systems = 85.7%	% of States with a Guide-Document and an action plan approved = 100%	% of States with SLAs = 90.5%
ATG (PIARCO)	YES	YES	YES
BHS		YES	YES
BRB	YES	YES	NA(*)
BLZ (COCESNA)	YES	YES	YES
CAN	YES	YES	NA
CRI	YES	YES	NA
CUB	YES	YES	NA
DOM	YES	YES	NA
SLV (COCESNA/CEPA)	YES	YES	YES
USA	YES	YES	NA
GRD (PIARCO)	YES	YES	YES
GTM (COCESNA)	YES	YES	YES
HTI		YES	
HND (COCESNA)	YES	YES	YES
JAM		YES	
MEX	YES	YES	NA
NIC	YES	YES	YES
KNA (PIARCO)	YES	YES	YES
LCA (PIARCO)	YES	YES	YES
VCT (PIARCO)	YES	YES	YES
TTO (PIARCO)	YES	YES	YES

(\*) NA - Not applicable

2.5 On **Project G2 – “Aeronautical information/data management”**, the Programme Coordinator of the SAM Region stated that, although there had been no participation by the Coordinator or any expert, there was no significant impact because the recent ASBU methodology had extended the implementation target date. Furthermore, the corresponding SARPs in Annex 15 and Annex 4 (and the associated manuals) related to the definition of the aeronautical information exchange models developed by the United States and Europe (AICM and AIXM) are not available. Nevertheless, some States and one international organisation (Canada, United States, Mexico, Dominican Republic, Nicaragua, Trinidad and Tobago and COCESNA) have started working on the AIXM for the electronic exchange of AIP data.

2.6 Finally, **Project G3 – “Development of quality specifications applicable to a digital AIM environment”**, although neither the Coordinator nor any expert participated, it is considered as finalised in view of the production of ICAO Doc 9839. The guidance material has been developed by the AIS-to-AIM Transition Study Group (AIS-AIMSG) of ICAO Headquarters to assist States in the planning and implementation of a QMS for aeronautical information management (AIM) and thus meet the requirement of Annex 15 (Aeronautical Information Services) on the implementation of a QMS by States. Manual 9839 contains key elements to give the States an understanding of QMS requirements and to assist in the development of a State Quality Manual, which is the basis for the provision of aeronautical information in a way that meets the timeliness and quality requirements contained in Annex 15.

2.7 Furthermore, it should be noted that several States and international organisations in the Region have implemented, or have started the process for the implementation of, a QMS. Those that have already implemented it are: Canada, Costa Rica, Cuba, United States, Nicaragua, Dominican Republic, and COCESNA, and those that are in the process of implementation are: Trinidad and Tobago (PIARCO States and Territories), Mexico, Barbados, and CEPA (El Salvador). See the following table:

State	% of implementation January 2012	% of implementation May 2013	% of progress
ATG (PIARCO)	40	70	30
BHS	0	0	0
BRB	25	35	10
BLZ (COCESNA)	0	0	0
CAN	CERTIFIED		
CRI	100		
CUB	CERTIFIED		
DOM	CERTIFIED		
SLV (CEPA)	25	25	0
USA	CERTIFIED		
GRD (PIARCO)	40	70	30
GTM	0	0	0
HTI	0	0	0
HND	0	20	20
JAM	0	0	0
MEX	50	60	10
NIC	100		
KNA (PIARCO)	40	70	30
LCA (PIARCO)	40	70	30
VCT (PIARCO)	40	70	30
TTO (PIARCO)	40	70	30

### ***Projects of the AIM Programme for the SAM Region***

2.8 Regarding **Project G1 “Implementation of the provision of electronic terrain and obstacle data (e-TOD)”** shown in **Appendix B1**, an action plan was developed for the implementation of functional improvements in the provision of aeronautical information services.

2.9 Likewise, a “Guide-Document on the objectives of the e-TOD project” was developed, making reference to the background of e-TOD implementation in the States of the Region, with a detailed description of the tasks to be performed for said implementation. It also refers to the economic aspects (elements to be considered when calculating costs) and the target dates for the completion of the project. Finally, it also provides guidance on the conduction of the project risk assessment.

2.10 Furthermore, a document on the “Technical and e-TOD project specifications” was prepared, containing information aimed mainly at meeting the technical requirements for the implementation of the e-TOD project. It contains a large amount of conceptual information on digital elevation, obstacle, metadata, quality and other models.

2.11 As part of the tasks under Project e-TOD, a model was developed for the establishment of Service Level Agreements (SLAs) to receive aeronautical data and information under pre-defined criteria that will ensure that their introduction in aeronautical information management systems will result in the delivery of information under the quality criteria defined for ATM systems in the Global Operations Concept of Air Traffic Management.

2.12 The products developed to assist SAM States in the implementation of the provision of electronic terrain and obstacle data (e-TOD), and which were analysed and approved at the meeting held within the concept of GREPECAS Project G1, are as follows:

- a) Guide-Document on the objectives of the e-TOD project.
- b) Technical and e-TOD project specifications.
- c) Model service level agreement (SLA).
- d) Model list of data for SLAs.

2.13 By early 2012, only 2 States had an automated system. In 2013, 4 States have a GIS or automated system for the integration of aeronautical information. In early 2012, there were no States with an approved Implementation Guide-Document. At present, 100% of SAM States have an approved Guide-Document. In 2012, no State had reported SLAs. In 2013, 2 States -Argentina and Uruguay- have SLAs. SLAs are essential to ensure the quality of the data received from the aeronautical information services for publication.

#### Analysis of the achievement of goals, based on G1 indicators/metrics

- Percentage of States with GIS or automated systems implemented.
- Percentage of States with a Guide-Document and an action plan approved.
- Percentage of States with SLAs.

2012 State	% of States with automated or GIS systems = <b>14%</b>	% of States with a Guide-Document and an action plan approved = <b>0%</b>	% of States with SLAs = <b>0 %</b>
ARG	YES		
BOL			
BRA	YES		
CHI			
COL			
ECU			
FGY			
GUY			
PAN			
PAR			
PER			
SUR			
URU			
VEN			

2013 State	% of States with automated or GIS systems = <b>28</b> %	% of States with a Guide-Document and an action plan approved = <b>100%</b>	% of States with SLAs = <b>14%</b>
ARG	YES	YES	YES
BOL		YES	
BRA	YES	YES	
CHI		YES	
COL	YES	YES	
ECU		YES	
FGY		YES	
GUY		YES	
PAN		YES	
PAR		YES	
PER	YES	YES	
SUR		YES	
URU		YES	YES
VEN		YES	

2.14 *Project G2 - “Implementation of aeronautical information exchange systems (AIXM)”* shown in **Appendix B2**, still has no coordinator and tasks have been performed by the Programme Coordinator. Nor have the States offered to contribute with an expert to coordinate the tasks under this Project.

2.15 The Secretariat produced the deliverables that were possible using the information provided at the SAM/AIM/3 and SAM/AIM/4 meetings, but the project on the exchange of aeronautical data and information is behind schedule.

2.16 In order to address issues concerning the exchange of aeronautical information and data, more expertise needs to be generated, since there are no AIM experts in the Region duly trained to develop and contribute to this Project. An AIXM seminar is scheduled for 2014.

2.17 Notwithstanding the above, the delay in this Project does not have a significant impact, since the ASBU methodology has extended the implementation target date, and there is a delay in the development by Headquarters of the corresponding SARPs regarding the characteristics and operational use of exchange models currently valid in Europe and the United States.

#### **Analysis of the achievement of goals, based on Project G2 indicators/metrics**

- Number of States that have implemented an action plan for data exchange systems.

2.18 No State has implemented an action plan for data exchange (AIXM).

2.19 Regarding **Project G3 - “Implementation of the quality management system in AIM units”** shown in **Appendix B3**, significant progress has been made, and all project deliverables have been completed. There is one activity pending completion in August 2013 for certification reporting.

2.20 A Plan for the implementation of the quality management system in aeronautical information services was developed for the States, in connection to each Article of ISO standard

9001:2008, the contents of each component, the framework for QMS implementation, the responsibilities of the various areas, and the action to be taken for its implementation.

2.21 The following QMS products were developed and approved at regional level:

- a) QMS implementation plan.
- b) Procedures for QMS corrective and preventive actions.
- c) Procedure for QMS internal audits.
- d) Procedure for controlling AIS management system records.
- e) Procedure for drafting QMS documents.
- f) Procedure for controlling non-conforming QMS services/products.
- g) Procedures for controlling AIS management system documents.

### Analysis of the achievement of goals, based on Project G3 indicators/metrics

- Number of States with ISO 9001:2008 QMS certification.

2.22 At present, 5 States have QMS certification in the SAM Region: **Brazil, Chile, Ecuador, French Guiana, and Paraguay**. In early 2012, there were 4 States certified. Chile was re-certified with the new QMS standard, and Brazil completed the certification process.

The status of implementation in 2012 and 2013 is shown below:

State	% of implementation January 2012	% of implementation May 2013	% of progress
Argentina	30 %	30%	0%
Bolivia	30%	30%	0%
Brazil	75%	<b>CERTIFIED</b>	15%
Chile	<b>CERTIFIED</b>	<b>RE-CERTIFIED</b>	-
Colombia	70%	90%	20%
Ecuador	<b>CERTIFIED</b>		
French Guiana	<b>CERTIFIED</b>		
Guyana	0%	25%	25%
Panama	70%	70%	0%
Paraguay	<b>CERTIFIED</b>		
Peru	40%	50%	10%
Suriname	30%	35%	5%
Uruguay	90%	95%	5%
Venezuela	50%	50%	0%

### 3. Conclusion

3.1 Projects G1 and G3 have progressed as scheduled, and Project G2, although delayed and lacking a Coordinator, has not had any negative impact because the ASBU methodology has extended the target dates for the implementation of the aeronautical information exchange by States.

### 4. Suggested action:

4.1 The Meeting is invited to:

- a) take note of the information contained in this working paper;
- b) analyse and formulate any actions it may deem appropriate regarding project activities shown in Appendices A and B.

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## APPENDIX A1

CAR Region	PROJECT DESCRIPTION (DP)	DP N° G1	
<i>Programme</i>	Title of the Project	Start	End
AIM (ICAO Programme Coordinator: Raúl Martínez)	Developments for the provision of electronic terrain and obstacle data (e-TOD) (CAR) Project coordinator: Alfredo Mondragón (COCESNA) Experts contributing to the project: None	26/09/11	31/12/15
<b>Objective</b>	Support the implementation of the provision of e-TOD by CAR States and provide States with guidance on e-TOD implementation.		
<b>Scope</b>	The scope of the project contemplates the assessment and identification of implementation levels associated to the provision of electronic terrain and obstacle data. It contemplates guidance for the drafting of an action plan and guidance for e-TOD implementation to support the development of digital terrain models (DTMs) to support the production of electronic aeronautical charts and other products required by the users.		
<b>Metrics</b>	Number of States with an e-TOD implementation action plan. Number of States that establish letters of agreement with geographical institutes and adjacent States (FIRs).		
<b>Strategy</b>	The conduction of project activities will be coordinated among project members, the project coordinator, and the programme coordinator, mainly through teleconferences (and other electronic media). The project coordinator will coordinate with the programme coordinator for the inclusion of additional experts, if warranted by the tasks and work to be performed. The results of the work done will be submitted to the consideration and review of State experts in the form of a final consolidated document for analysis, review and approval, and for presentation to the GREPECAS PPRC by the programme coordinator.		
<b>Goals</b>	Prepare the Guide-Document for the implementation of eTOD, in Spanish. Prepare the document with the original specifications described in the English document.		

<b>Rationale</b>	Compliance with the SARPs contained in ICAO Annexes 15 and 4, and with Doc 9881, “Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information” based on developments by EUROCONTROL and RTCA, of which only the draft version in English has been available for several years. Accordingly, in order to facilitate implementation in Spanish-speaking States, it is necessary to have guidance material in that language.				
<b>Related projects</b>	This project is related to projects G2 “Aeronautical information/data management” and G3 “Assessment and development of QMS applied to AIM in CAR States”				
<b>Project deliverables</b>	<b>Relationship with the performance-based regional plan (PFF)</b>	<b>Responsible party</b>	<b>Status of Implementation*</b>	<b>Delivery date</b>	<b>Comments</b>
Develop the Guide-Document containing the objectives of the eTOD project. ( <i>Part 1</i> )	PFF: CAR AIM/02	Alfredo Mondragón COCESNA		August 2012	Finalised as scheduled.
Develop the Guide-Document containing the objectives of the eTOD project ( <i>Part 2</i> )	PFF: CAR AIM/0	Raúl Martínez ICAO NACC		April 2013	Finalised as scheduled.
<b>Resources required</b>	Designation of experts in the execution of deliverables. Commitment by States to support the designated Coordinators and experts.				

\*Grey Task not started

Green Activity underway as scheduled

Yellow Activity started with some delay but expected to be completed on time

Red It has not been possible to implement this activity as scheduled; mitigating 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**  
**DESARROLLOS PARA EL SUMINISTRO DE LOS DATOS ELECTRONICOS SOBRE EL TERRENO Y LOS OBSTACULOS (E-TOD) (CAR)**

ID	Nombre de tarea	Duration																		
			2011	2011	2011	2012	2012	2012	2012	2013	2013	2013	2013	2014	2014	2014	2014	2015	2015	2015
			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	<b>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)</b>	1375 days?																		
2	Actualización sobre estado de implantación eTOD en la Región CAR. Updating on the status of e-TOD implementation in the CAR Region.	341 days?	Raúl Martínez,OACI																	
3	Generar Informe de Implantación E-TOD en la Región CAR. Generate e-TOD implementation report in the CAR Region.	196 days?	Raúl Martínez,OACI																	
4	Adaptar Manual de Datos de obstáculos y terreno para Región CAR. Adjust the e-TOD Manual to the CAR Region.	110 days?	Raúl Martínez,OACI Alfredo S. Mondragón,COCESNA																	
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?	Raúl Martínez,OACI Alfredo S. Mondragón,COCESNA																	
6	Material Guía general para la implementación de un	59 days?	Raúl Martínez,OACI																	
7	Promover capacitación y la documentación para operadores AIM en e-TOD. Foster training and documentation for e-TOD AIM operators.	512 days?	Raúl Martínez,OACI																	
8	Seguimiento a los desarrollos para el suministro de	1114 days?	OACI,Estados y Proveedores																	
9	Dar seguimiento a los desarrollos para el suministro	1114 days?	OACI,Estados y Proveedores																	

## APPENDIX A2

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: Martin Fuentes M. Experts contributing to the project: None				November 2012	TBD
Objective	Develop an action plan to be implemented by States for the electronic exchange of aeronautical information/data.					
Scope	The scope of the project contemplates the assessment of automation levels associated to the integration of the model for the electronic exchange of aeronautical information and data in the region, and the follow-up on the development of Annex 15 SARPs on this matter.					
Metrics	Number of States that have implemented an action plan for electronic data exchange systems.					
Goals	Complete all the documentation required for the development of action plans to support the States.					
Strategy	The conduction of project activities will be coordinated among project members, the project coordinator, and the programme coordinator, mainly through teleconferences (and other electronic media). The project coordinator will coordinate with the programme coordinator for the inclusion of additional experts, if warranted by the tasks and work to be performed. Coordination will take place between the CAR and SAM Regions. The results of the work done will be submitted to the consideration and review of State experts in the form of a final consolidated document for analysis, review, and approval, and for presentation to the GREPECAS PPRC by the programme coordinator.					
Rationale	Integrate the aeronautical information in electronic media to allow the interoperability of ATM system, while preserving safety, applying the information exchange models validated by ICAO.					
Related projects	This project is related to Projects G1 and G3.					
Deliverables	Relationship with the performance-based regional plan (PFF)	Responsible party	Status of implementation*	Delivery date	Comments	
Review the related specifications developed by the FAA and EUROCONTROL for their incorporation	PFF: CAR AIM/02	ICAO Coordinator		TBD	Underway	

Drafting of the Guide-Plan of Action for the States	PFF: CAR AIM/02	ND		03/12/13	
Establish the procedure to ensure the harmonisation of aeronautical data and information exchange	PFF: CAR AIM/02	ND		03/07/14	
<b>Resources required</b>	Designation of experts in the execution of deliverables. Commitment by States to support the Coordinators and experts.				

*\*Grey Task not started*










*Green Activity underway as scheduled*

*Yellow Activity started with some delay but expected to be completed on time*



*Red It has not been possible to implement this activity as scheduled; mitigating measures are required*

Timetable in MS Project with the 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	Start	Finish	Predecessors	2011				2012				2013				2014			
						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	Qtr 4
1	 <b>Proyecto G2 Gestión de información/datos aeronáuticos/Project G2 Aeronautical Information Management</b>	<b>522 days</b>	<b>Mon 31/12/12</b>	<b>Wed 31/12/14</b>																	
2	 Plan de acción/Action Plan	8.75 days	Thu 31/01/13	Tue 12/02/13																	
3	 <b>1.1 Encuesta sobre situación de implementacion del AIXM en los Estados/1.1 Survey on status of implementation of the AIXM States</b>	<b>29.75 days</b>	<b>Thu 28/02/13</b>	<b>Wed 10/04/13</b>	2																
4	<b>1.2 Modelo carta de acuerdo entre los Estados usuarios de DB/1.2 Model letter of agreement between the States of DB users</b>	<b>450.13 days?</b>	<b>Wed 10/04/13</b>	<b>Wed 31/12/14</b>	3																
5	 1.2.1 Listado de proveedores de DB compatibles con el AIXM/1.2.1 Compatible with the AIXM DB providers listing	22 days	Wed 10/04/13	Fri 10/05/13																	
6	 1.2.2 Monitoreo de acuerdos firmados por Estados/1.2.2 Monitoring of agreements signed by States	182 days	Tue 22/04/14	Wed 31/12/14	5																
7	<b>1.3 Status de la informacion electronica por Estado/1.3 Status of electronic information by State</b>	<b>94.13 days?</b>	<b>Wed 10/04/13</b>	<b>Tue 20/08/13</b>																	
8	 1.3 Status de la informacion electronica por Estado/1.3 Status of electronic information by State	0 days?	Wed 10/04/13	Wed 10/04/13																	
9	 1.3 Status de la informacion electronica por Estado/1.3 Status of electronic information by State	0 days?	Tue 20/08/13	Tue 20/08/13																	
10	1.3.1 Encuesta en los Estados sobre los avances de la implementacion del eAIP/1.3.1 Survey in the States on the progress of the implementation of the eAIP	22 days	Wed 10/04/13	Fri 10/05/13																	
11	1.3.2 Analisis de datos y formulacion de un plan de accion Regional/1.3.2 Data analysis and formulation of a Regional action plan	72 days	Fri 10/05/13	Tue 20/08/13	10																
12	<b>1.4 Seminario para la implantación del modelo AIXM ver. 5.1/1.4 Seminar for the implementation of the AIXM model ver. 5.1</b>	<b>222 days</b>	<b>Thu 01/01/15</b>	<b>Fri 06/11/15</b>	4																
13	1.4.1 Guía básica para el uso del modelo AIXM ver. 5.1/1.4.1 Basic Guide for the use of the AIXM model ver. 5.1	222 days	Thu 01/01/15	Fri 06/11/15	11																
14	 <b>1.5 Informe de cierre del Proyecto/1.5 The project closure report</b>	<b>89.75 days</b>	<b>Mon 09/11/15</b>	<b>Fri 11/03/16</b>	13																
15	<New Summary Task>	1.25 days?	Fri 11/03/16	Mon 14/03/16	14																
16	 <New Summary Task>	0 days?	Fri 11/03/16	Fri 11/03/16																	

**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	Start	Finish	Predecessors	2011				2014			
							Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
17		<New Summary Task>	0 days?	Mon 14/03/16	Mon 14/03/16									
18		<New Task>	1 day	Fri 11/03/16	Mon 14/03/16									

◆ 14/03

11/03 | 14/03

### APPENDIX A3

CAR Region	PROJECT DESCRIPTION (DP)	DP N° G3	
Programme	Title of the Project	Start	End
AIM  (ICAO Programme Coordinator: Raúl Martínez )	Development of guides on QMS applied to AIM in CAR States  Project coordinator: Enrique Echarri (Cuba )  Experts contributing to the project: None	September 2012	March 2013
<b>Objective</b>	Prepare guides applicable to the quality management system (QMS) in the digital/electronic environment of AIM in the CAR Region.		
<b>Scope</b>	The scope of the project contemplates the assessment and identification of implementation levels associated to quality management in AIM services of the Region. Drafting of an action plan and guides for the implementation of QMS in the digital/electronic environment of AIM.		
<b>Metrics</b>	Number of States that have implemented ISO 9001:2008 QMS.		
<b>Goals</b>	Draft the Guide-Document for the implementation of QMS in AIM in support of the States that have not done it yet.		
<b>Strategy</b>	Project activities will be coordinated among project members, the project coordinator, and the programme coordinator, mainly through teleconferences (and other available electronic media). The project coordinator will coordinate with the programme coordinator for the inclusion of additional experts, if warranted by the tasks and works to be executed. The results of the work done will be submitted to the consideration and review of State experts in the form of a final consolidated document for analysis, review, and approval, and for presentation to the GREPECAS PPRC by the programme coordinator.		
<b>Rationale</b>	The quality management system in AIM services must give users the necessary assurance and confidence that the aeronautical information/data being distributed meets quality requirements in terms of accuracy, resolution and integrity. The States need ICAO guidance for the QMS implementation process.		
<b>Related projects</b>	This project is related to projects G1 “Developments for the provision of terrain and obstacle data eTOD” and G2 “Aeronautical information/data management”.		



Project deliverables	Relationship with the performance-based regional plan (PFF)	Responsible party	Status of implementation*	Delivery date	Comments
Prepare guides for the implementation of AIM-QMS based on ICAO requirements (ICAO draft Doc 9839, Manual on the quality management system for aeronautical information services is attached)	PFF: CAR AIM/01	ICAO coordinator		25/11/11	Finalised on schedule.
<b>Resources required</b>	Designation of experts in the execution of some deliverables. Commitment by States to support the Coordinators and experts.				

\*Grey Task not started

Green Activity underway as scheduled

Yellow Activity started with some delay but expected to be completed on time

Red It has not been possible to implement this activity as scheduled; mitigating measures are required

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

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)  
QUALITY SPECIFICATIONS APPLICABLE TO AIM DIGITAL ENVIRONMENT / ESPECIFICACIONES DE CALIDAD APLICABLES AL ENTORNO DIGITAL AIM

ID	Nombre de tarea	Duration	2012												2013																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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1	ELABORACIÓN DE LAS ESPECIFICACIONES DE CALIDAD APLICABLES AL ENTORNO DIGITAL AIM./ELABORATION OF THE SPECIFICATIONS OF QUALITY APPLICABLE TO THE AIM DIGITAL ENVIRONMENT.	415 days																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										</

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)  
QUALITY SPECIFICATIONS APPLICABLE TO AIM DIGITAL ENVIRONMENT / ESPECIFICACIONES DE CALIDAD APLICABLES AL ENTORNO DIGITAL AIM

ID	Nombre de tarea	Duration	2012												2013																	
			Qtr 2, 2012				Qtr 3, 2012				Qtr 4, 2012				Qtr 1, 2013				Qtr 2, 2013				Qtr 3, 2013				Qtr 4, 2013				Qtr 1, 2014	
			Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb						
21	Recopilar información y experiencias de la aplicación de las Normas ISO en entornos digitales y sistemas informáticos./Gather information and experiences of the application of the ISO standards in digital environments and computer systems.	10 days												Enrique Echarri 17/12																		
22	Estudiar toda la información recopilada./Study the information collected.	20 days												Enrique Echarri 17/12																		
23	Elaborar borrador del documento con las especificaciones de calidad aplicables al entorno digital AIM./Develop draft of the document with the specifications of quality applicable to the AIM digital environment.	20 days												Enrique Echarri 17/01																		
24	Enviar a los Estados CAR el borrador del documento con especificaciones de calidad para su consideración./Send to CAR States the draft document with specifications of quality for consideration.	7 days												Raúl Martínez 14/02																		
25	Recopilar información de las consideraciones de los Estados CAR del borrador de las especificaciones de calidad./Collect information from considerations of the CAR States of the draft of the quality specifications.	10 days												Enrique Echarri 11/03																		
26	Elaborar documento final con las especificaciones de calidad aplicables al entorno digital AIM y enviar a los Estados CAR./Develop draft of the document with the specifications of quality applicable to the AIM digital environment.	15 days												Raúl Martínez y Enrique Echarri 25/03																		
27	Implantar las especificaciones de calidad en el entorno digital AIM./Implement the specifications of quality in the AIM digital environment.	180 days												15/04																		
28	Recopilar información mediante encuesta sobre el nivel de implantación de las especificaciones de calidad en los Estados CAR./Collect information through survey on the level of implementation of the specifications of quality in the CAR States.	20 days																														
29	Elaborar informe de los resultados de la implantación de las especificaciones de calidad./Report of the results of the implementation of the quality specifications.	15 days																														
30	Elaborar modelos de acuerdos entre Estados, originadores de datos, proveedores de servicios y garantizar el intercambio de datos./ Modeling of agreements between States, data originators, service providers to ensure data exchange.	150.88 days																														
31	Elaborar borradores de modelos de cartas de acuerdo y remitirlos a la Oficina Regional NACC./Develop models of letters of agreement drafts and refer them to the NACC Regional Office.	10 days												Enrique Echarri 02/07																		
32	Revisar y aceptar los modelos de cartas de acuerdo pertinentes para los Estados CAR./Review and accept models of letters of agreement relevant to the States.	10 days												Raúl Martínez 16/07																		
33	Enviar a los Estados CAR los modelos de cartas de acuerdos para su consideración./Send to the States CAR models of letters of agreements for consideration.	5 days												Raúl Martínez 30/07																		
34	Aplicar los modelos de cartas de acuerdo en los Estados CAR./Apply the models of letters of agreement in the CAR States.	100 days												07/08																		
35	Recopilar información mediante encuesta sobre el nivel de aplicación de los modelos de cartas de acuerdo en los Estados CAR./ Collect information through survey on the level of implementation of the models of letters of agreement in the CAR States.	15 days																														
36	Elaborar informe de los resultados de la aplicación de los modelos de cartas de acuerdo./Report of the results of the application of models of letters of agreement.	10 days																														
37	Identificar las necesidades de instrucción en QMS en los Estados CAR./Identify the needs of instruction in QMS in the CAR States.	214 days																														
38	Elaborar encuesta para identificar las necesidades de instrucción en QMS en los Estados CAR./Develop survey to identify the needs of instruction in QMS in the CAR States.	5 days																														
39	Circular las encuestas a los Estados CAR./Circular surveys to the CAR States.	10 days																														
40	Recopilar y tabular la información de los Estados./Collect and tabulate the information from States.	5 days																														
41	Elaborar informe de las necesidades de Instrucción./Report of the instruction needs.	10 days																														

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP / GRUPO REGIONAL CAR/SAM DE PLANIFICACION Y EJECUCION (GREPECAS)  
QUALITY SPECIFICATIONS APPLICABLE TO AIM DIGITAL ENVIRONMENT / ESPECIFICACIONES DE CALIDAD APLICABLES AL ENTORNO DIGITAL AIM

ID	Nombre de tarea	Duration	2012																							
			Qtr 2, 2012				Qtr 3, 2012				Qtr 4, 2012				Qtr 1, 2013				Qtr 2, 2013				Qtr 3, 2013			
			Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
42	Elaborar Programas de Instrucción, adecuados para los Estados CAR./Develop programmes of instruction, suitable for the CAR States.	30 days																								
43	Enviar a los Estados CAR los Programas de Instrucción para su consideración./Send to CAR States the instruction programs for consideration.	10 days																								
44	Aplicar los Programas de Instrucción en los Estados CAR./Apply the programmes of instruction in the CAR States.	108 days																								
45	Controlar la implantación del QMS y las especificaciones de calidad en el entorno digital AIM en los Estados CAR./Control the QMS implementation and the quality specifications in the AIM digital environment in the CAR States.	368 days?																								
46	Recopilar mediante encuesta información sobre los Estados que han Certificado su QMS bajo la Norma ISO 9001:2008./ Through survey collect information on States that have certification QMS under the norm ISO 9001: 2008.	15 days																								
47	Informar a la Oficina Regional NACC de la OACI los AIM de los Estados CAR que han logrado la certificación de sus sistemas de calidad./ Inform ICAO NACC Regional Office on the AIM of the CAR States that have certified their QMS.	5 days																								
48	Recopilar copia de las Certificaciones emitidas por las empresas certificadoras./Collect copies of the certificates issued by certification companies.	15 days																								
49	Elaborar Informe Final de la Implantación del QMS en los Estados CAR./Prepare Final report of the implementation of the QMS in the CAR States.	5 days																								
50	<b>COMPLETADO CON LA LIBERACION DEL DOC. 9839 DE LA OACI.</b>	1 day?																								

**APPENDIX B1**

<b>SAM Region</b>	<b>PROJECT DESCRIPTION (DP)</b>	<b>DP N° G1</b>	
<b><i>Programme</i></b>	<b>Title of the Project</b>	<b>Start</b>	<b>End</b>
<b><i>AIM</i></b>  (ICAO Programme Coordinator: Roberto Arca Jáurena)	Implementation of the 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
<b>Objective</b>	Support the implementation of the provision of e-TOD by SAM States, and provide guidance to States on GIS acquisition and management.		
<b>Scope</b>	The scope of the project contemplates the assessment and identification of implementation levels associated to the provision of electronic terrain and obstacle data. It contemplates the drafting of an Action plan and guides for the implementation of e-TOD to support developments in the provision of electronic terrain and obstacle data for the evolution of digital terrain models (DTM) to gradually improve electronic aeronautical charts and other similar products, with the support of tools such as the geographical information systems (GIS).		
<b>Metrics</b>	<ul style="list-style-type: none"> <li>• Number of States that have implemented GIS or automated systems.</li> <li>• Guide-document with action plan approved.</li> <li>• Number of States that establish SLAs.</li> </ul>		

<b>Strategy</b>	<p>The conduction of project activities will be coordinated among project members, the project coordinator, and the programme coordinator, mainly through teleconferences (GoToMeeting application) and meetings that may be held within other scheduled events, based on the activities of the work programme. The project coordinator will coordinate with the programme coordinator for the inclusion of additional experts, if warranted by the tasks and works to be executed.</p> <p>The results of the work done will be submitted to the consideration and review of State experts in the form of a final consolidated document for analysis, review, and approval, and for presentation to the GREPECAS PPRC by the programme coordinator.</p>				
<b>Goals</b>	<p>Draft the Guide-document containing the objectives of the e-TOD project. 2012.</p> <p>Define the technical and e-TOD project specifications. 2012.</p> <p>Prepare the document containing the e-TOD technical specifications. 2012.</p> <p>Guide on the acquisition of a geographical information system (GIS). 2012.</p> <p>GIS implementation Manual. 2012.</p>				
<b>Rationale</b>	<p>Compliance with the SARPs of Annexes 15 and 4 to facilitate the execution of performance-based air operations and to advance with the AIS-AIM Transition Roadmap. A close relationship with other projects is needed in order to obtain the operational requirements of the aforementioned applications and their respective tentative dates of implementation.</p>				
<b>Related projects</b>	<p>This project is related to Project G2 “Implementation of Aeronautical Information Exchange Systems (AIXM)” and Project G3 “Implementation of the Quality Management System in the AIM units” in the CAR/SAM States.</p>				
<b>Project deliverables</b>	<b>Relationship with the performance-based regional plan (PFF)</b>	<b>Responsible party</b>	<b>Status of implementation*</b>	<b>Delivery date</b>	<b>Comments</b>
Survey on the status of eTOD implementation.	PFF: SAM AIM/02	Juan González Uruguay		30/11/2011	Finalised on schedule.

Generate follow-up report.	PFF: SAM AIM/02	Juan González Uruguay		30/04/2012	Finalised on schedule.
Develop Guide-Document with the objectives of the eTOD project.	PFF: SAM AIM/02	Juan González Uruguay		30/09/2012	Finalised on schedule. Delivered 30/09/2012
Define the technical specification of the eTOD project.	PFF: SAM AIM/02	Juan González Uruguay		30/09/2012	Finalised on schedule. Delivered 30/09/2012
Develop the document with the eTOD technical specifications.	PFF: SAM AIM/02	Juan González Uruguay		30/09/2012	Finalised on schedule. Delivered 30/09/2012
Guide for the acquisition of a geographical information system (GIS).	PFF: SAM AIM/01	Juan González Uruguay		09/03/2012	Finalised on schedule.
GIS implementation manual.	PFF: SAM AIM/01	Juan González Uruguay		09/03/2012	Finalised on schedule.
Conduct seminars for eTOD specialists, describing the plans and expected operational and economic benefits.	PFF: SAM AIM/02	ICAO coordinator		30/09/2014	
Develop a training programme and documentation for eTOD operators.	PFF: SAM AIM/02	Juan González Uruguay		31/10/2014	
<b>Resources required</b>	Designation of experts in the execution of some of the deliverables. More commitment by States to support the designated Coordinators and experts.				

\*Grey

*Task not started*

Green

*Activity underway as scheduled*

Yellow
















*Activity started with some delay but expected to be completed on time*

Red

*It has not been possible to implement this activity as scheduled; mitigating measures are required*













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

G1 - Implantación del suministro de datos electrónicos sobre el terreno y obstáculos (e-TOD) en los Estados SAM / Implementation for the provision of terrain and obstacle electronic data (e-TOD) in SAM States

ID	Nombre de tarea	Duration	Start	Finish	Resource Names	10	2012						2014		
							Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1
1	 <b>Implantación del suministro de los datos electrónicos sobre el terreno y obstáculos (e-TOD) en los Estados SAM + GIS/Implementation for the provision of terrain and obstacle electronic data (e-TOD) in SAM States + GIS</b>	793 days	Thu 17/11/11	Mon 01/12/14	Juan Gonzalez/Coordinador OACI										
2	 <b>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)</b>	118 days	Thu 17/11/11	Mon 30/04/12	Juan González										
3	 Generar Formulario de Consulta/Generate survey form	10 days	Thu 17/11/11	Wed 30/11/11	Juan González										
4	 Circular a los Estados/Circulate to States	7 days	Thu 01/12/11	Fri 09/12/11	Juan González										
5	 Reunir información de los Estados/Gather information from States	12 days	Thu 01/03/12	Fri 16/03/12	Juan González										
6	 Informe de seguimiento/Follow up report	64 days	Wed 01/02/12	Mon 30/04/12	Juan Gonzalez/Coordinador										
7	<b>Plan de acción e-TOD/e-TOD action plan</b>	675 days	Tue 01/05/12	Mon 01/12/14											
8	 <b>Objetivos/Objectives</b>	109 days	Tue 01/05/12	Sun 30/09/12											
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)	90 days	Tue 01/05/12	Sun 30/09/12	Juan González										
10	 Elaborar el Documento Guía con los objetivos del proyecto/Prepare guidance document with project objectives	80 days	Mon 11/06/12	Sun 30/09/12	Juan González										
11	 <b>Especificaciones técnicas/Technical specifications</b>	94 days	Mon 03/09/12	Thu 10/01/13											
12	 Definir las especificaciones técnicas y del proyecto/Define technical specifications of the project	20 days	Mon 03/09/12	Fri 30/11/12	Juan González										
13	 Elaborar el documento con las especificaciones técnicas/Prepare the document with technical specifications	30 days	Fri 30/11/12	Thu 10/01/13	Juan González										
14	<b>Realizar Acuerdos/Carry out agreements</b>	315 days	Mon 18/06/12	Fri 30/08/13											
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	Tue 04/09/12	Mon 15/10/12	Estados										
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	Mon 18/06/12	Fri 24/08/12	Estados										
17	 Firmar acuerdo de nivel de servicio (SLA) entre proveedores y servicio AIS/Sign service agreement - SLA between providers and AIS service	256 days	Fri 07/09/12	Fri 30/08/13	Estados/ Proveedores										
18	<b>Capacitación/Training</b>	284 days	Tue 01/10/13	Fri 31/10/14											



G1 - Implantación del suministro de datos electrónicos sobre el terreno y obstáculos (e-TOD) en los Estados SAM / Implementation for the provision of terrain and obstacle electronic data (e-TOD) in SAM States

ID	Nombre de tarea	Duration	Start	Finish	Resource Names	2012												2014		
						10	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 1	Qtr 3	Qtr 1
19	 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.	3 days	Fri 26/09/14	Tue 30/09/14	Coordinador de Programa															Coordinador de Programa 26/09 ↓ 30/09
20	 Desarrollar un programa de capacitación y la documentación para operadores de e-TOD/Develop training programme and documentation for e-TOD operators	284 days	Tue 01/10/13	Fri 31/10/14	Juan Gonzalez/Coordinador OACI															Juan Gonzalez/Coordinador OACI 01/10 → 31/10
21	<b>Análisis de requerimientos tecnológicos / Technological requirements analysis</b>	283 days	Wed 31/10/12	Fri 29/11/13																
22	 Evaluación de costos del proyecto en general/General project cost assessment	239 days	Wed 31/10/12	Mon 30/09/13	Estados															Estados 31/10 → 30/09
23	 Elaborar la documentación financiera/Draft financial documentation	44 days	Mon 02/09/13	Thu 31/10/13	Estados															Estados 02/09 → 31/10
24	 Presentar a la alta gerencia del documento final para su aprobación/Present the High Level Management the final document for approval	150 days	Mon 06/05/13	Fri 29/11/13	Estados															Estados 06/05 → 29/11
25	<b>Adquisición de herramientas tecnológicas/Acquisition of technological tools</b>	326 days	Mon 02/09/13	Mon 01/12/14																
26	 Adquirir los software, hardware y aplicativos de última tecnología/Acquire software and hardware and applications of state-of-the-art technology	152 days	Mon 02/09/13	Tue 01/04/14	Estados															Estados 02/09 → 01/04
27	 Instalar y poner en funcionamiento de las herramientas tecnológicas adquiridas/Install and put into operation technology tools acquired	132 days	Tue 01/04/14	Wed 01/10/14	Estados															Estados 01/04 → 01/10
28	 Entrenar al personal especializado en el manejo de estas herramientas/Train specialised personnel in handling these tools	43 days	Thu 02/10/14	Mon 01/12/14	Estados															Estados 02/10 → 01/12
29	 <b>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</b>	50 days	Mon 02/01/12	Fri 09/03/12																
30	 <b>Desarrollos de Guías y Manuales GIS/Guidance and Manual Developments</b>	50 days	Mon 02/01/12	Fri 09/03/12																
31	 Guía para la adquisición de un sistema de información geográfica/Guidance material for acquisition of a GIS	50 days	Mon 02/01/12	Fri 09/03/12	Juan González															Juan González 02/01 → 09/03
32	 Manual Guía Implantación de un GIS/Guidance for GIS implementation	50 days	Mon 02/01/12	Fri 09/03/12	Juan González															Juan González 02/01 → 09/03

**APPENDIX B2**

<b>SAM Region</b>	<b>PROJECT DESCRIPTION (DP)</b>	<b>DP N° G2</b>	
<b><i>Programme</i></b>	<b>Title of the Project</b>	<b>Start</b>	<b>End</b>
<i>AIM</i>  (ICAO Programme Coordinator: Roberto Arca Jáurena)	G2: Implementation of Aeronautical Information Exchange Systems (AIXM) (SAM)  Project coordinator: No coordinator  Experts contributing to the project: SAM/AIM/IG	01/03/12	01/12/13
<b>Objective</b>	Prepare an action plan to be implemented by States for the application of the aeronautical information/data exchange model.		
<b>Scope</b>	The scope of the project contemplates the evaluation and identification of automation levels associated to the integration of the aeronautical information and data exchange model in the Region, through surveys, the identification of database providers, and the follow-up on the development of SARPs on this matter.		
<b>Metrics</b>	Number of States that have implemented an Action Plan for data exchange systems.		
<b>Goals</b>	Complete all the documentation needed by States before 31/12/13.		

<b>Strategy</b>	Project activities will be coordinated among project members, the project coordinator, and the programme coordinator, mainly through teleconferences (GoToMeeting application). Seminars/meetings are scheduled in accordance with work programme activities. The project coordinator will coordinate with the programme coordinator for the inclusion of additional experts, if warranted by the tasks and work to be performed. Coordination will take place between the CAR and SAM Regions. The results of the work done will be submitted to the consideration and review of State experts in the form of a final consolidated document for analysis, review, and approval, and for presentation to the GREPECAS PPRC by the programme coordinator.				
<b>Rationale</b>	Integrate aeronautical information so as to permit the interoperability of ATM systems while preserving safety, applying the information exchange models.				
<b>Related projects</b>	This project is related to Project G3 “Implementation of the Quality Management Systems in the AIM units in SAM States”.				
<b>Project deliverables</b>	<b>Relationship with the performance-based regional plan (PFF)</b>	<b>Responsible party</b>	<b>Status of implementation*</b>	<b>Delivery date</b>	<b>Comments</b>
Survey of the provision of IAIP, using a table.	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Finalised on schedule at the SAM/AIM meeting.
Circulation of IAIP survey to States	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Finalised on schedule at the SAM/AIM meeting.
Collection and updating	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Finalised on schedule at the SAM/AIM meeting.
Collection of experiences in SAM States with the electronic AIP	PFF: SAM AIM/02	ICAO coordinator		16/03/12	Finalised on schedule at the SAM/AIM meeting.

Analyse related Eurocontrol specifications for their incorporation.	PFF: SAM AIM/02	ICAO coordinator		01/10/14	
Organise AIXM seminar	PFF: SAM AIM/02	ICAO coordinator		03/07/14	
Develop guidance material		ICAO coordinator		28/11/14	
Develop AIXM action plan for the States	PFF: SAM AIM/02	ICAO coordinator		03/03/15	
<b>Resources required</b>	Designation of experts in the execution of some of the deliverables. Commitment by States to support the coordinators and experts.				

*\*Grey Task not started*


















*Green Activity underway as scheduled*

*Yellow Activity started with some delay but expected to be completed on time*

*Red It has not been possible to implement this activity as scheduled; mitigating measures are required*

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

G2 - Implantación de sistemas de intercambio de información aeronáutica (AIXM) - Aeronautical Information Systems Data Exchange (AIXM)

ID	Nombre de tarea	Duration	Start	Finish	2011				2012				2013				2014				Q1
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
1	 <b>Implantación de Sistemas de Intercambio de Información Aeronáutica(AIXM)/Aeronautical Information Systems Data Exchange (AIXM)</b>	804 days?	Thu 01/03/12	Tue 31/03/15																	
2	 <b>Identificar el estado de implantación sobre el suministro de Documentación Integrada Iaip/Identify status of implementation on the provision of integrated AIP documentation</b>	51 days	Thu 01/03/12	Thu 10/05/12																	
3	 Relevamiento de suministro de la IAIP mediante el uso de una tabla/Collection of IAIP provision through the use of a table	51 days	Thu 01/03/12	Thu 10/05/12																	
4	 Distribución a los Estados/Distribution to States	51 days	Thu 01/03/12	Thu 10/05/12																	
5	 Recolección y Actualización/Collection and updating	29 days	Thu 01/03/12	Tue 10/04/12																	
6	 <b>AIP Electrónico/Electronic AIP</b>	32 days	Thu 01/03/12	Fri 13/04/12																	
7	 Recolección de experiencias en los Estados de la Región SAM/Collection of experiences in the SAM Region States	32 days	Thu 01/03/12	Fri 13/04/12																	
8	 <b>Modelo de Intercambio de Información Aeronáutica (AIXM)/Aeronautical Information Exchange Management (AIXM)</b>	563 days?	Thu 31/01/13	Tue 31/03/15																	
9	  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	Thu 31/01/13	Tue 03/12/13																	
10	  Seminario AIXM/AIXM Seminar	71 days	Wed 26/03/14	Thu 03/07/14																	
11	  Elaborar material guía acerca del concepto/Prepare guidance material about the concept	71 days	Thu 21/08/14	Fri 28/11/14																	
12	  Desarrollar Plan de Acción AIXM/Develop AIXM Action Plan	67 days?	Fri 28/11/14	Tue 03/03/15																	
13																					
14																					
15		173 days?	Fri 01/08/14	Tue 31/03/15																	

### APPENDIX B3

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 Jáurena)	Assessment and development of QMS applied to AIM in SAM States  Project coordinator: Oscar Diones (Peru)  Experts contributing to the Project: SAM/AIM IG David Díaz (Peru)	03/10/11	01/09/14
<b>Objective</b>	Implement guides applicable to the quality management system in a digital/electronic AIM environment in the SAM Region, based on the regional performance objectives of the SAM performance-based implementation plan.		
<b>Scope</b>	The scope of the project contemplates the assessment and identification of implementation levels associated to quality management in AIM services in the Region. Drafting of an action plan and guides for the implementation of QMS in a digital/electronic AIM environment.		
<b>Metrics</b>	Percentage of States with ISO 9001:2008 QMS certification.		
<b>Goals</b>	50% of States with the ISO standard 9001:2008 implemented by 2013, and certified by 2014.		
<b>Strategy</b>	Project activities will be coordinated among project members, the project coordinator, and the programme coordinator, mainly through teleconferences (GoToMeeting application) and meetings that may be held within other scheduled events, based on the activities of the work programme. The project coordinator will coordinate with the programme coordinator for the inclusion of additional experts, if warranted by the tasks and work to be performed.  The results of the work done will be submitted to the consideration and review of State experts in the form of a final consolidated document for analysis, review, and approval, and for presentation to the GREPECAS PPRC by the programme coordinator.		

<b>Rationale</b>	The quality management system in AIM services must provide users the required guarantee and assurance that the aeronautical information/data distributed meets quality requirements in terms of accuracy, resolution and integrity. There needs to be a close relationship with other projects in order to collect the operational requirements of the aforementioned applications and their respective tentative dates of implementation.				
<b>Related projects</b>	This project is related to Projects G1 “Implementation of the provision of electronic terrain and obstacle data e-TOD” and G2 “Implementation of Aeronautical Information Exchange Systems (AIXM)”.				
<b>Project deliverables</b>	<b>Relationship with the performance-based regional plan (PFF)</b>	<b>Responsible party</b>	<b>Status of implementation*</b>	<b>Delivery date</b>	<b>Comments</b>
Prepare surveys to establish the levels of compliance and implementation of AIM-QMS based on ICAO guides	PFF: SAM AIM/01	ICAO coordinator		25/11/11	Finalised as scheduled.
Circulate surveys to the States	PFF: SAM AIM/01	ICAO coordinator		17/02/12	Finalised as scheduled.
Collect and tabulate the information of the States	PFF: SAM AIM/01	ICAO coordinator		13/04/12	Finalised on 30/03/12.
Description of steps for QMS implementation.	PFF: SAM AIM/01	SAM/AIM/WG		30/03/12	Finalised as scheduled.

QMS self-assessment questionnaire	PFF: SAM AIM/01	David Diaz RLA/06/901		30/03/12	Finalised as scheduled.
Template with QMS assessment results	PFF: SAM AIM/01	David Diaz RLA/06/901		30/03/12	Finalised as scheduled.
QMS implementation plan	PFF: SAM AIM/01	David Diaz RLA/06/901		19/10/12	Finalised as scheduled.
QMS procedures and preventive actions.	PFF: SAM AIM/01	Oscar Diones Peru		19/10/12	Finalised as scheduled.
QMS internal audit procedure.	PFF: SAM AIM/01	Oscar Diones Peru		19/10/12	Finalised as scheduled.
Procedure for controlling AIS service management system records	PFF: SAM AIM/01	Oscar Diones Peru		19/10/12	Finalised as scheduled.
Procedure for drafting QMS documents.	PFF: SAM AIM/01	Oscar Diones Peru		19/10/12	Finalised as scheduled.
Service control procedure – QMS non-conforming products.	PFF: SAM AIM/01	Oscar Diones Peru		19/10/12	Finalised as scheduled.
Procedures for controlling the documents of the AIS service management system.	PFF: SAM AIM/01	Oscar Diones Peru		19/10/12	Finalised as scheduled.
SLA with service providers to ensure the quality of the information and the AIM data exchange.	PFF: SAM AIM/01	Juan J. González Uruguay		19/10/12	Finalised as scheduled.



Collect certifications and produce report on the status of ISO 9001:2008 certifications in the SAM Region	PFF: SAM AIM/01	ICAO coordinator		01/09/14	
<b>Resources required</b>	Designation of experts in the execution of some of the deliverables. More commitment by States to support the designated coordinators and experts.				

*\*Grey Task not started*  
*Green Activity underway as scheduled*  
*Yellow Activity started with some delay but expected to be completed on time*  
*Red It has not been possible to implement this activity as scheduled; mitigating measures are required*

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

G3 - Implantación del sistema de gestión de calidad en las dependencias AIM en los Estados de la Región SAM / Implementation of QMS in AIM units in the SAM Region																			
ID		Nombre de tarea	Start	Finish	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter		
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1		<b>IMPLANTACIÓN DEL QMS EN LAS DEPENDENCIAS AIM DE LOS ESTADOS DE LA REGION SAM/IMPLEMENTATION OF QMS IN AIM UNITS IN THE SAM REGION</b>	<b>Mon 03/10/11</b>	<b>Mon 01/09/14</b>															
2	✓📅	<b>Identificar el nivel de implantación del QMS para la transición del AIS hacia la AIM en los Estados SAM/ Identify the level of QMS implementation for the AIS-AIM transition in the SAM Region</b>	<b>Mon 03/10/11</b>	<b>Thu 31/05/12</b>															
3	✓	Preparar encuestas para establecer niveles de cumplimiento e implementación del QMS-AIM basados en las guías OACI/Develop surveys to determine status of QMS in AIM transition roadmap based on ICAO guidelines	Mon 03/10/11	Fri 25/11/11															
4	✓	Circular las encuestas a los Estados/ Deliver the questionnaires to the States	Mon 28/11/11	Fri 17/02/12															
5	✓	Recopilar y tabular la información de los Estados/collect data from States	Mon 20/02/12	Fri 13/04/12															
6	✓	Generar Informe de Implantación/Implementation Report	Fri 20/04/12	Thu 31/05/12															
7	✓	Descripción de pasos para implantar el QMS/ Step description to implement QMS	Thu 01/03/12	Fri 30/03/12															
8	✓	Cuestionario de auto evaluación QMS/ QMS Self evaluation Questionnaire	Thu 01/03/12	Fri 30/03/12															
9	✓	Planilla con Resultado de evaluación QMS/ evaluation Results Template	Thu 01/03/12	Fri 30/03/12															
10	✓📅	<b>Desarrollar Plan de Acción en implantación del QMS -AIM SAM incluyendo cumplimiento del sistema AIRAC /Develop a SAM Action Plan to ensure QMS implementation in SAM Region, including compliance with AIRAC system</b>	<b>Mon 18/06/12</b>	<b>Fri 19/10/12</b>															
11	✓	Plan de Implantación del sistema QMS/Plan of Implementation of the QMS system	Mon 18/06/12	Fri 19/10/12															
12	✓	Procedimientos de Acciones y preventivas del QMS/QMS CORRECTIVE AND PREVENTIVE ACTION PROCEDURE	Mon 18/06/12	Fri 19/10/12															
13	✓	Procedimiento de auditoría interna del QMS/QMS INTERNAL AUDIT	Mon 18/06/12	Fri 19/10/12															
14	✓	Procedimiento para el control de registro del Sistema de gestión del servicio AIS/CONTROL OF DOCUMENTS OF THE MANAGEMENT SYSTEM OF THE AIR	Mon 18/06/12	Fri 19/10/12															
15	✓	Procedimiento de elaboración de documentos del QMS/PROCEDURE FOR DRAFTING QUALITY MANAGEMENT SYSTEM	Mon 18/06/12	Fri 19/10/12															
16	✓	Procedimiento de control de servicios-Productos no conformes del QMS/PROCEDURE FOR CONTROLLING QMS NON-CONFORMING	Mon 18/06/12	Fri 19/10/12															
17	✓	Procedimientos para el Control de Documentos del Sistema de gestión de los Servicios AIS/CONTROL OF RECORDS OF THE AIS MANAGEMENT SYSTEM	Mon 18/06/12	Fri 19/10/12															
18	📅	<b>Control sobre la certificación AIM-QMS obtenida por los diferentes estados / Control of the AIM/QMS Certification obtained by the States</b>	<b>Fri 25/11/11</b>	<b>Mon 01/09/14</b>															
19	🗂️⚠️	Recopilar las certificaciones QMS-AIM ISO9001-2008/Collect ISO9001-2008 QMS/AIM Certifications	Fri 25/11/11	Mon 01/09/14															

The timeline chart displays the following key events:

- Task 3:** A bar spanning from Mon 03/10/11 to Fri 25/11/11, labeled "Coordinador OACI".
- Task 4:** A bar starting at Mon 28/11/11 and ending at Fri 17/02/12, also labeled "Coordinador OACI".
- Task 5:** A bar starting at Mon 20/02/12 and ending at Fri 13/04/12, labeled "Coordinador OACI".
- Task 6:** A bar starting at Fri 20/04/12 and ending at Thu 31/05/12.
- Task 7:** A bar starting at Thu 01/03/12 and ending at Fri 30/03/12.
- Task 8:** A bar starting at Thu 01/03/12 and ending at Fri 30/03/12.
- Task 9:** A bar starting at Thu 01/03/12 and ending at Fri 30/03/12.
- Task 10:** A bar starting at Mon 18/06/12 and ending at Fri 19/10/12.
- Task 11:** A bar starting at Mon 18/06/12 and ending at Fri 19/10/12.
- Task 12:** A bar starting at Mon 18/06/12 and ending at Fri 19/10/12.
- Task 13:** A bar starting at Mon 18/06/12 and ending at Fri 19/10/12.
- Task 14:** A bar starting at Mon 18/06/12 and ending at Fri 19/10/12.
- Task 15:** A bar starting at Mon 18/06/12 and ending at Fri 19/10/12.
- Task 16:** A bar starting at Mon 18/06/12 and ending at Fri 19/10/12.
- Task 17:** A bar starting at Mon 18/06/12 and ending at Fri 19/10/12.
- Task 18:** A long bar starting at Fri 25/11/11 and extending past the visible date range.
- Task 19:** A bar starting at Fri 25/11/11 and extending past the visible date range, labeled "Coordinador OACI".

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