



INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)
CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
(GREPECAS)

THIRTEENTH MEETING OF THE AERONAUTICAL
INFORMATION MANAGEMENT SUBGROUP

AIM/SG/13

FINAL REPORT

MEXICO CITY, MEXICO
19 TO 21 JULY 2011

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HISTORICAL

ii.1 Place and Date of the Meeting

The Thirteenth Meeting of the GREPECAS Aeronautical Information Management Subgroup (AIM/SG/13) was held at the premises of the ICAO NACC Regional Office in Mexico City, Mexico, from 19 to 21 July 2011.

ii.2 Opening Ceremony

Mr. Raúl Martínez, Regional Officer, Aeronautical Information Management of the ICAO North America, Central American and Caribbean Regional Office and Secretary of the AIM Subgroup provided opening remarks, welcomed the participants to Mexico City and officially opened the meeting.

ii.3 Officers of the Meeting

Mrs. Noemí Carta, Chairperson of the AIM Subgroup, presided over the meeting.

Mr. Raúl Martínez acted as Secretary of the Subgroup, assisted by Mr. Roberto Arca, Regional Officer, ATM/SAR/AIM of the ICAO South American Regional Office.

ii.4 Working Languages

The working languages of the meeting were English and Spanish. The working papers, information papers and draft report of the meeting were available to participants in both languages.

ii.5 Agenda

Agenda Item 1 Approval of the Agenda and Meeting Schedule

Agenda Item 2 Follow-up on Actions Adopted by the GREPECAS/16 Meeting

Agenda Item 3 Review of the Reports of the AIM Subgroup Task Forces

3.1 Report by the Rapporteur of the Fifth Meeting of the AIM Quality Management Task Force (AIM/QM/TF/5)

3.2 Report by the Rapporteur of the AIM Geographic Information System Task Force (AIM/GIS/TF/1)

Agenda Item 4 Transition of the AIM Subgroup, its Terms of Reference, Work Programme and Task Forces into the AIM Programme and Projects

- 4.1 Preparation of projects under the AIM
- 4.2 Project Integration for definition of metadata related to the AIM Programme
- 4.3 Designation of State officers as coordinators and experts for projects

Agenda Item 5 Other Issues

ii.6 Attendance

The Meeting was attended by 32 participants from 12 Subgroup Member States, 5 Contracting States located or having territories in the CAR/SAM Regions, as well as observers of one International Organization and one service provider. A list of participants is shown in page iii-1.

ii.7 Draft Conclusions

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13/1	High Priority to the Implementation of the Quality Management System in AIM (QMS)	3-1
13/2	Need to Accelerate the Adoption of SARPS and Guidance Material regarding the Conceptual Models and for Aeronautical Data/Information Exchange	4-2
13/3	Electronic Terrain and Obstacle Data Supply (e-TOD)	5-1

ii.8 List of Working Papers, Information Papers, Presentations and Filmsies

Refer to the Meeting web page:
<http://www.mexico.icao.int/RegionalGroups.html>, GREPECAS; or
<http://www.lima.icao.int>, GREPECAS

WORKING PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
WP/01	1	Draft Agenda, Working Method and Schedule for the AIM/SG/13 Meeting	03/05/11	Secretariat
WP/02	2	GREPECAS/16 Meeting Results	01/07/11	Secretariat
WP/03	3.1	Report of the AIM/QM/TF/5 Meeting	11/05/11	Secretariat
WP/04	3.2	Report of the First Meeting of the AIM Geographic Information System Task Force (AIM/GIS/TF/1)	11/07/11	Rapporteur

WORKING PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/05	4.1	Project Developments Under the AIM Programme	11/07/11	Secretariat
WP/06	4.2	Metadata Project Definition in AIM	13/07/11	Secretariat
WP/07	4.3	Designation of State Officers as Coordinators for Projects	12/07/11	Secretariat
WP/08	4.2	United States (U.S.) Progress in Transitioning from AIS to AIM	14/06/11	United States
WP/09	4.2	Need to Accelerate the Adoption of SARPs and Guidance Material Regarding AICM/AIXM Conceptual Models	16/06/11	Cuba
WP/10	5	Provision of electronic terrain and obstacle data	22/06/11	Secretariat

INFORMATION PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
NI/01	5	Experiencias del AIS/MAP Cuba en la interpretación e implementación de datos electrónicos sobre el terreno y los obstáculos (e-TOD) <i>Available only in Spanish</i>	16/06/11	Cuba
IP/02	4	Review of the AIM AIMSG/4 Meeting Summary of Discussions	07/07/11	United States
IP/03	--	List of Working Papers, Information Papers and Presentations	15/07/11	Secretariat
NI/04	3.2	Acciones para la implementación de un Sistema de Información Geográfica (SIG) <i>Available only in Spanish</i>	15/07/11	Chile

PRESENTATIONS

Number	Agenda Item	Title	Date	Prepared and Presented by
P/01	5	ICAO Electronic Terrain and Obstacle Data Amendments 33 & 36	08/07/11	United States
P/02	4	Designing AIS Staff Training Guidance Using a Competency Based Approach	08/07/11	United States
P/03	5	Digital NOTAM Presentation in Real Time (Test Case)	20/07/11	Jeppesen

FLIMSIES

Number	Agenda Item	Title	Date	Prepared and Presented by
01	4.1	Project Developments Under the AIM Programme and Designation of State Officers as Coordinators for Projects	19/07/11	Secretariat

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Agenda Item 1 Approval of the Agenda and Meeting Schedule

1.1 The Secretariat presented WP/01 inviting the Meeting to approve the provisional agenda and schedule for the meeting. The Meeting approved the agenda as presented in the historical section of this report and the schedule as presented in Appendix B to WP/01 and extending the schedule if necessary.

Agenda Item 2 Follow-up on Actions Adopted by the GREPECAS/16 Meeting

2.1 The Meeting discussed WP/02 on the new organisation and work methodology adopted by GREPECAS and the main results of that meeting. The objectives for improvements to the mechanism based on the experience of the CNS/ATM/SG, which was reorganized as a new organization based in Programmes and Projects, designating the CAR and SAM Regional Officers as programme coordinators, the Officers from CAR and SAM States as project coordinators and officers from CAR and SAM States as experts for the development and implementation of project tasks. All of this under a method scheme based on Project Management.

2.2 In addition, the Meeting identified the functions of the Programmes and Projects Review Committee (PPRC), highlighting that it will direct the program and project activities including the addition and deletion of programmes and projects and also that it will approve the program and project results. It was mentioned that the PPRC membership includes a core group of 16 States of the CAR and SAM Regions splitting the membership into 8 States from each Region. Also, the Meeting was informed about the nine main criteria to select Member States, clarifying that any State who wishes to participate will be allowed to do so.

2.3 The Meeting was informed about the 8 States who were selected to represent the CAR Region as members of the PPRC, during the Fourth Meeting of North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/4) (a Central American State, Cuba, Dominican Republic, Haiti, Jamaica, Mexico, Trinidad and Tobago and United States), the only one remaining to be defined is who would represent the Central America States. Furthermore, the Regional Officer, ATM/ SAR/AIM from the SAM Office informed the Meeting that in October they will carry out the Meeting of South American Directors of Civil Aviation, which will in turn make the corresponding selection of the 8 South American States who will participate in the PPRC.

2.4 Considering GREPECAS Conclusion 16/49 – *Contribution from States to the GREPECAS Resources* the Secretariat emphasized the meeting about the importance that States provide the necessary qualified human resources to participate and to release them from their normal duties for the three initial projects defined for the AIM Programme.

2.5 After a thorough review of the working paper, the Meeting was informed by the Secretariat about the bilingual course on GREPECAS Project Management Training, addressed to the ICAO coordinators designated to the programmes and to the coordinators from the CAR/SAM Region States assigned to the projects, in order to facilitate their management. This course is planned to be held in the ICAO SAM Regional Office from 7 to 11 November 2011.

2.6 Meeting participants expressed their concern to the Secretariat about the closeness of the dates for the course mentioned in the previous paragraph and requested that it be reconsidered to be modified and moved to the first quarter of 2012, thus allowing CAR and SAM States to plan their participation and guarantee their attendance.

Agenda Item 3 Review of the Reports of the AIM Subgroup Task Forces

3.1 Report by the Rapporteur of the Fifth Meeting of the AIM Quality Management Task Force (AIM/QM/TF/5)

3.1.1 The Meeting took note of the Fifth Meeting of the AIM Quality Management Task Force (AIM QM/TF/5) was held in Santo Domingo, Dominican Republic, 18 to 22 October 2010.

3.1.2 The Meeting was informed about the AIM Quality Management implementation status, which Brazil reported to have certified the MAP area back in October 2010.

3.1.3 The Argentinean delegation informed that the assistance related with the AIM Quality Management System implementation status indicated in Table 1 of Appendix to WP/03 was no longer necessary.

3.1.4 The Meeting considered that in order to consolidate Phase 1 of the Transition from AIS to AIM Roadmap it was necessary to request the Secretariat to forward the following Draft Conclusion to the GREPECAS fast track mechanism:

**DRAFT
CONCLUSION 13/1 HIGH PRIORITY TO THE IMPLEMENTATION OF THE
QUALITY MANAGEMENT SYSTEM IN AIM (QMS)**

CAR/SAM Regions States and Territories who have not yet implemented the AIM Quality Management System are urged to:

- a) consider giving the highest priority in their Administration to the requirement contained in ICAO Annex 15, and to take urgent actions for its implementation and later certification;
- b) establish a date for the implementation of QMS in AIM no later than **31 December 2012**; and
- c) send reports on the progress of the QMS implementation in the **months of June and December** of each year to the correspondent ICAO CAR or SAM Regional Office.

3.1.5 By analyzing the tasks that would remain outstanding following the disintegration of the Task Force resulted from the implementation of the new GREPECAS methodology, the meeting deemed appropriate that they be considered as activities to be developed under Project G3, which is proposed under Agenda Item 4 to this Report.

3.1.6 The United States delegate indicated some corrections to the information on the quality system implementation results, contained in paragraph 2.2 of the AIM/QM/TF/5 report.

3.2 Report by the Rapporteur of the AIM Geographic Information System Task Force (AIM/GIS/TF/1)

3.2.1 While analyzing the report of the First Meeting of the AIM Geographic Information System Task Force (AIM/GIS/TF/1), held in Rio de Janeiro, Brazil, 21 to 25 March 2011, the Meeting approved the report contained in Appendix to WP/04. Regarding the Decisions adopted by the GIS Task Force it was deemed appropriate that they be analyzed by the corresponding Programme Coordinators from both Regional Offices and by the corresponding Project Coordinators in order to recommend its inclusion as part of the tasks for Project G2.

3.2.2 The English-speaking States expressed their concern to the Secretariat regarding the fact that Task Force Reports are only made available in Spanish, which makes it difficult to understand their content. Therefore, the Meeting requested the Secretariat to maximize its efforts to translate Task Force Reports.

3.2.3 The Meeting unanimously congratulated the Rapporteurs and other members of the Quality Management (AIS/MAP QM/TF) and Geographic Information Systems (AIM GIS/TF) Task Forces for their work, and thanked them for the services rendered to the CAR/SAM Regions.

3.2.4 Finally, the meeting regretted the absence of the Rapporteur of the AIM Geographical Information System Task Force, since it was understood that his presence would have been convenient in order to carry out a complete assessment of the report and to clarify doubts that were raised by different States.

Agenda Item 4 Transition of the AIM Subgroup, its Terms of Reference, Work Programme and Task Forces into the AIM Programme and Projects

4.1 Preparation of projects under the AIM

4.1.1 Through WP/05 and Flimsy 01, the Secretariat proposed to the Meeting three initial Projects and included a proposal of initial tasks under the AIM Programme (G). The Secretariat explained to the Meeting that on 18 July there was an AIM and AGA Coordination Meeting with the participation of the Chairpersons of each Subgroup, the Task Force Rapporteurs, the Secretaries of both Subgroups and the AIM and AGA Regional Officers from the CAR and SAM Regions, in order to review the project proposals that were presented to the Meeting.

4.1.2 The Secretariat clarified that the Projects represent high-level activities and that the tasks involved are an initial approach for the progress in the AIS to AIM transition based on the ICAO AIS to AIM Transition Roadmap and within the context of performance-based air navigation implementation.

4.1.3 The meeting commented that it would be important to define the type of communication and coordination to be carried out between the CAR and SAM Regions in order to avoid duplication of efforts by the different levels of coordination and to maintain the efficiency objectives to accomplish the results represented as deliverables in the defined tasks.

4.1.4 After a detailed review of the initial project proposals under the AIM Programme, the Meeting determined to consider the Projects, Tasks and CAR Region Coordinators contained in **Appendix A** to this part of the Report.

4.2 Project Integration for definition of metadata related to the AIM Programme

4.2.1 The Secretariat stressed to the meeting on the importance that the States define and apply the metadata to AIM requesting to consider the inclusion of this issue in the AIM Project tasks. In this sense, the Meeting commented that the aeronautical information exchange model already contains the metadata definition.

4.2.2 The delegate from the United States presented WP/08, which shows the progress attained by this State in the transition from AIS to AIM, under the air transport system (NextGen), in accordance with the ICAO Roadmap in issues such as digital NOTAM, the information managed during its life-cycle, the AIM work processes (workflow), the Aeronautical Information Exchange Model (AIXM), the Flight Information Exchange Model (FIXM), Weather Information Exchange Model (WXXM), the quality of information and update of Annex 15 – Aeronautical Information Services.

4.2.3 Additionally, it was expressed that the United States is concerned that the limited resources available within the Air Navigation Bureau (ANB) may impede progress and create a situation where technical capabilities outpace ICAO SARPs. In voicing these concerns, the United States is also aware of the strain on resources that will be imposed by preparation for the proposed MET/AIM Divisional Meeting. The United States will fully assist ICAO to make progress; it is cognizant of the particular significance and importance of the planned divisional meeting.

4.2.4 Under the WP/09, the delegate from Cuba presented to the Meeting background on the intention of ICAO to adopt in the SARPSs the conceptual models and the difficulties that would represent to States to work in its implementation before being adopted by ICAO. Considering the abovementioned, the following Draft Conclusion is proposed to be forwarded to the GREPECAS fast track mechanism:

DRAFT

CONCLUSION 13/2

NEED TO ACCELERATE THE ADOPTION OF SARPS AND GUIDANCE MATERIAL REGARDING THE CONCEPTUAL MODELS AND FOR AERONAUTICAL DATA/INFORMATION EXCHANGE

That, the GREPECAS Secretary elevates to ICAO Headquarters the concern about the need to accelerate the adoption of standards and recommended practices (SARPs) and guidance material in English and Spanish, such as Doc 9881, the AIM Quality Manual, the AIM Training Manual, as well as those related with the aeronautical information exchange and conceptual models to become official documents to be homogeneously implemented by all member States and allow the development and implementation of these models in a trustworthy and safe environment.

4.3 Designation of State officers as coordinators and experts for projects

4.3.1 Through WP/07, the Secretariat proposed to define the assignment of human resources for the AIM programme, which includes a series of tasks to be implemented of the AIM, in line with and to follow up on the requirements of GREPECAS new *modus operandi* methodology based on Programmes and Projects.

4.3.2 The Meeting identified the proposed Coordinators for the CAR Region (to be confirmed by their corresponding administrations), for the three Projects defined for the AIM Programme, as follows:

- The Coordinator of Project G1, to be determined – *Developments for the supply of electronic terrain and obstacle data (e-TOD) in CAR and SAM States*
- Mexico (DGAC/SENEAM), name still to be determined, as Coordinator of Project G2 – *Aeronautical Information/Data Management*
- The delegate from Cuba, Mr. Enrique Echarri as Coordinator of Project G3 – *Development of the quality specifications applicable to the AIM digital environment*

4.3.3 Trinidad and Tobago expressed its interest to provide experts for each one of the Projects; in addition, Cuba indicated the possibility to participate in Projects G1 and G2 (both participations to be confirmed by their corresponding Administrations). Under these elements, the Meeting was requested to analyze the proposals for experts in each field to be integrated into the AIM Programme in each of the defined AIM Projects.

4.3.4 Regarding the designation of experts from the SAM Region, the Meeting was informed that the South American States present during the Meeting, as well as Uruguay, who informed of its interest via e-mail, expressed their interest to collaborate as Project Coordinators and Experts. However, the names of the officers will be coordinated in the future between the corresponding administrations and the South American Regional Office, taking into account the limitation of human and economic resources of the Administrations.

4.3.5 Regarding the aforementioned, Brazil expressed that it was necessary to consult with their authorities in order to take into account the impact that these regional projects will have in the macro projects of their Administration for the migration to AIM.

4.3.6 Furthermore, Bolivia, Chile, Colombia and Ecuador supported the idea to supply the names of experts after the Meeting and expressed interest to collaborate with the projects.

4.3.7 In addition, the Meeting expressed its considerations regarding the lack of Annex 15 standards and recommended practices (SARPs) for the implementation of AIM conceptual models (aeronautical information conceptual model and aeronautical information exchange model). To this end, the Secretariat informed that ICAO is currently in the process of preparing Amendments 37 and 38 to Annex 15 with a date of implementation of 2013 and 2016 respectively. These amendments will introduce AIM SARPs, including the digital data exchange requirements. On this issue, COCESNA highlighted its progress regarding the future application of these models as well as the related training that has been carried out in the regions through seminars.

4.3.8 Finally, the United States CNA Representative provided the following internet links, which are related with the topics mentioned in the previous paragraphs:

http://www.aixm.aero/public/subsite_homepage/homepage.html

http://www.eurocontrol.int/aim/public/standard_page/interop_tod_intro.html

APPENDIX A

G. PROGRAMME: **Aeronautical Information Management (AIM)**
PROGRAMA: **Gestión de la Información Aeronáutica (AIM)**

G1 PROJECT: Developments for the supply of electronic terrain and obstacle data (e-TOD) in CAR and SAM States
PROYECTO: Desarrollos para el suministro de los datos electrónicos sobre el terreno y los obstáculos (e-TOD) en los Estados CAR y SAM

CAR To be determined / A determinarse Tel.: +
Coordinator/Coordinador: E-mail

SAM To be determined / A determinarse Tel.: +
Coordinator/Coordinador: E-mail

No.	Task / Tarea	Start-End / Inicio-Fin	Responsible / Responsable	Status / Estado	Deliverable / Entregable
1	2	3	4	5	6
G 1.1	Identify the level of implementation of the Standard on Electronic terrain data provision for Area 1 (Annex 15, 10.1.3). 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).	2011 - 2011	Programme Coordinator Coordinador del Programa	Valid Válida	Report on the level of implementation of the ICAO Standard in CAR/SAM States. (e-TOD, Area 1) Informe del nivel de implantación de la Norma OACI en los Estados CAR/SAM. (e-TOD, Area 1)
G 1.2	Development of Action Plan. Elaboración de Plan de Acción.	2011 - 2012	PROJECT G1 PROYECTO G1	Valid Válida	Action Plan. Plan de Acción
G 1.2.1	Develop guidelines to deliver data on behalf of cartographic entities to State aeronautical authorities for the development and implementation of surveys in accordance with electronic terrain and obstacle data. Elaborar guía para la entrega de los datos por parte de las entidades cartográficas a las autoridades aeronáuticas de los Estados, para el desarrollo y ejecución de los levantamientos según requisitos de los datos sobre el terreno y los obstáculos.	2011 - 2012	PROJECT G1 PROYECTO G1	Valid Válida	Guidance on fundamental aspects to be coordinated and finalized with cartographic entities and DGAs. Guía de aspectos fundamentales a coordinar y precisar con las entidades cartográficas y DGAs.

No.	Task / Tarea	Start-End / Inicio-Fin	Responsible / Responsable	Status / Estado	Deliverable / Entregable
1	2	3	4	5	6
G 1.2.2	<p>Support the preparation of technical tasks to obtain electronic terrain and obstacle data, considering:</p> <ul style="list-style-type: none"> • Definition of objectives; • Ensure data quality requirements (accuracy, resolution, integrity, and traceability);Data numeric requirements and attributes; • Implementation deadlines and results delivery as well as delivery characteristics. <p>Apoyar la elaboración de Tareas Técnicas para la obtención de los datos electrónicos del terreno y los obstáculos, considerando:</p> <ul style="list-style-type: none"> • Definición de los Objetivos; • Garantizar los requerimientos de calidad de datos (precisión, resolución, integridad y rastreabilidad) • Requisitos numéricos de los datos y sus atributos; • Plazos de ejecución y entrega de los resultados así como las características con que deben ser entregados los mismos. 	2011 - 2012	PROJECT G1 PROYECTO G1	Valid Válida	<p>Detailed guidance with steps to be followed for the preparation of Technical Tasks.</p> <p>Orientaciones detalladas de pasos a seguir para la elaboración de las Tareas Técnicas.</p>
G 1.2.3	<p>Assist in the implementation of schedules of data surveys by cartographic entities with technical support.</p> <p>Asistir la ejecución de Cronogramas de levantamiento de los datos por las entidades cartográficas, con apoyo técnico.</p>	2011 - 2015	PROJECT G1 PROYECTO G1	Valid Válida	<p>Report on the implementation of defined deadlines for the compliance of the standard.</p> <p>Informe de la ejecución de los plazos definidos para el cumplimiento de la norma.</p>
G 1.2.4	<p>Analyze electronic terrain and obstacle data survey results in accordance with the data collection requirements for each of the Areas and application of tools to manage the final data.</p> <p>Analizar los resultados de los trabajos de levantamiento de los datos del terreno y los obstáculos con los requerimientos de recolección de datos para cada una de las áreas y la aplicación de herramientas para el manejo de los datos finales.</p>	2011- 2015	PROJECT G1 PROYECTO G1	Valid Válida	<p>Benefit to have the proper tools to handle final data in air navigation applications.</p> <p>Beneficios de contar con las herramientas adecuadas para el manejo de los datos finales en las aplicaciones de navegación aérea.</p>

No.	Task / Tarea	Start-End / Inicio-Fin	Responsible / Responsable	Status / Estado	Deliverable / Entregable
1	2	3	4	5	6
G 1.3	<p>Development of GIS in the CAR/SAM States to manage electronic terrain and obstacle data as well as to manage data required to support defined air navigation applications.</p> <p>Desarrollo del GIS en los Estados CAR/SAM para la gestión de los datos aeronáuticos del terreno y los obstáculos, así como gestionar la información requerida para el apoyo de las aplicaciones de navegación aérea definidas.</p>	2015	<p>PROJECT G1</p> <p>PROYECTO G1</p>	<p>Valid</p> <p>Válida</p>	<p>Digital aeronautical data through GIS for air navigation applications.</p> <p>Datos aeronáuticos digitales a través de GIS para aplicaciones de navegación aérea.</p>
G 1.4	<p>Identify training needs and prepare relevant guidance material and/or training programmes.</p> <p>Identificar las necesidades de instrucción, y elaborar guías y/o programas de instrucción pertinentes</p>	2011 - 2012	<p>PROJECT G1</p> <p>PROYECTO G1</p>	<p>Valid</p> <p>Válida</p>	<p>Report on the training needs and/or training programmes, as determined.</p> <p>Reporte de las necesidades de instrucción y/o guías o programas de instrucción según se determine.</p>

G. PROGRAMME: Aeronautical Information Management (AIM)
PROGRAMA: Gestión de la Información Aeronáutica (AIM)

G2 PROJECT: Aeronautical Information/Data Management
PROYECTO: Gestión de información/datos aeronáuticos

CAR Name to be determined / Nombre a determinarse Tel.: +
Coordinator/Coordinador: Mexico / México E-mail

SAM To be determined / A determinarse Tel.: +
Coordinator/Coordinador: E-mail

No.	Task / Tarea	Start-End / Inicio-Fin	Responsible / Responsable	Status / Estado	Deliverable / Entregable
1	2	3	4	5	6
G 2.1	Study the information management resources and processes needed to ensure the timely collection, integration, exchange and delivery of quality-assured aeronautical information and aeronautical data within the ATM system. Estudiar los recursos y procesos de la gestión de la información que se necesitan para garantizar la recolección, integración, intercambio y entrega oportuna de información y datos aeronáuticos cuya calidad haya sido garantizada.	2012 - 2013	PROJECT G2 PROYECTO G2	Valid Válida	Provide CAR/SAM States with relevant guidance material for the electronic data exchange. Poner a disposición de los Estados CAR/SAM los materiales y guías pertinentes para el intercambio de datos electrónicos.
G-2.1.1	Study the process requirements for data quality from originator to end user Estudiar los requerimientos para el procesamiento de la calidad de los datos desde el remitente hasta el destinatario	2012 - 2013	PROJECT G2 PROYECTO G2	Valid Válida	Report on the Study the process requirements for data quality from originator to end user Informar sobre el estudio de los requerimientos para el procesamiento de la calidad de los datos desde el remitente hasta el destinatario.

No.	Task / Tarea	Start-End / Inicio-Fin	Responsible / Responsable	Status / Estado	Deliverable / Entregable
1	2	3	4	5	6
G 2.2	<p>Study the guidance material prepared by the AIS-AIMSG for its adaptation and implementation in the CAR/SAM Regions regarding metadata, electronic aeronautical charts and geographic information systems (GIS). Study the products based on AIXM generated by EUROCONTROL, the FAA and others, as references for the development of these applications in the CAR/SAM States, required by the user community.</p> <p>Estudio del material guía elaborado por el AIS-AIMSG para su adaptación y aplicación a las Regiones CAR/SAM, en materia de metadatos, cartas aeronáuticas electrónicas y sistemas de información geográfica (GIS). Estudiar los productos basados en el AIXM generados por EUROCONTROL, FAA y otros, como referencias para el desarrollo de estas aplicaciones en los Estados CAR/SAM requeridos por la comunidad de usuarios.</p>	2012 - 2013	<p>PROJECT G2</p> <p>PROYECTO G2</p>	<p>Valid</p> <p>Válida</p>	<p>CAR/SAM Guidance and recommendations to implement the aeronautical information and exchange conceptual model. Proposal of digital products to be assessed for their possible development by States.</p> <p>Recomendaciones y Guías CAR/SAM para la aplicación del modelo conceptual y de intercambio de información aeronáutica. Propuesta de productos digitales a ser evaluados para posible desarrollo por los Estados.</p>
G 2.3	<p>Action Plan</p> <p>Plan de Acción</p>	2011 - 2013	<p>PROJECT G2</p> <p>PROYECTO G2</p>	<p>Valid</p> <p>Válida</p>	<p>Action Plan</p> <p>Plan de Acción</p>
G 2.4	<p>Identify training needs.</p> <p>Identificar las necesidades de instrucción.</p>	2011 - 2012	<p>PROJECT G2</p> <p>PROYECTO G2</p>	<p>Valid</p> <p>Válida</p>	<p>Report on the training needs.</p> <p>Reporte de las necesidades de instrucción.</p>

- G. PROGRAMME: Aeronautical Information Management (AIM)**
PROGRAMA: Gestión de la Información Aeronáutica (AIM)
Coordinator/Coordinador: ICAO / OACI
- G3 PROJECT: Development of the quality specifications applicable to the AIM digital environment**
PROYECTO: Elaboración de las especificaciones de calidad aplicables al entorno digital AIM
- CAR** Enrique Echarri Contreras Tel.: + 537 266 4497
Coordinator/Coordinador: Cuba E-mail echarri@aeronav.ecasa.avianet.cu
- SAM** To be determined / A determinarse Tel.: +
Coordinator/Coordinador: E-mail

No.	Task / Tarea	Start-End / Inicio-Fin	Responsible / Responsable	Status / Estado	Deliverable / Entregable
1	2	3	4	5	6
G 3.1	Identify the level of implementation of Annex 15 quality management system standards for digital data and the use of ICAO and ISO Standards necessary for AIS to AIM transition. Identificar el nivel de implantación de las Normas relacionadas con el sistema de gestión de la calidad para los datos digitales y el uso de las Normas de la OACI e ISO necesarias para la transición del AIS al AIM de la OACI.	2011 - 2012	PROJECT G3 PROYECTO G3	Valid Válida	Report on the level of implementation of ICAO and ISO Standards in CAR/SAM States. Informe del nivel de implantación de las Normas de la OACI e ISO en los Estados CAR/SAM.
G 3.2	Prepare Memorandum of Agreement proposals between neighboring States, aeronautical data originators, service providers and others, to maintain and guarantee the data quality in the data exchange of the entire AIM processes. Elaborar propuestas de modelos de acuerdos entre los Estados vecinos, los originadores de datos aeronáuticos, los proveedores de servicios y otros, para mantener y garantizar la calidad de los datos en el intercambio de datos en toda la cadena de procesos AIM.	2011 - 2012	PROJECT G3 PROYECTO G3	Valid Válida	AIM/QMS Agreement Models to be used in CAR/SAM States. Modelos de acuerdos AIM/QMS a emplear en los Estados CAR/SAM.
G 3.3	Action Plans for the implementation of quality systems for CAR and SAM States. Planes de acción para la implantación de sistemas de calidad para los Estados CAR y SAM.	2011 - 2012	PROJECT G3 PROYECTO G3	Valid Válida	Action Plan for CAR and SAM Regions States. Plan de acción para los Estados de las Regiones CAR y SAM.

No.	Task / Tarea	Start-End / Inicio-Fin	Responsible / Responsable	Status / Estado	Deliverable / Entregable
1	2	3	4	5	6
G 3.4	<p>Identify training needs and develop relevant training programmes for CAR/SAM States.</p> <p>Identificar las necesidades de instrucción y desarrollar programas de instrucción relevantes para los Estados CAR/SAM.</p>	2011 - 2012	<p>PROJECT G3</p> <p>PROYECTO G3</p>	<p>Valid</p> <p>Válida</p>	<p>Report on the training needs. Appropriate training programmes developed.</p> <p>Reporte de las necesidades de instrucción. Desarrollo de programas de instrucción adecuados.</p>

APPENDIX B

- G. PROGRAMME: Aeronautical Information Management (AIM)**
PROGRAMA: Gestión de la Información Aeronáutica (AIM)
Coordinator/Coordinador: ICAO / OACI
- G1 PROJECT: Developments for the supply of electronic terrain and obstacle data (e-TOD) in CAR and SAM States**
PROYECTO: Desarrollos para el suministro de los datos electrónicos sobre el terreno y los obstáculos (e-TOD) en los Estados CAR y SAM
- CAR To be determined / A determinarse Tel.: +**
Coordinator/Coordinador: E-mail
- SAM To be determined / A determinarse Tel.: +**
Coordinator/Coordinador: E-mail

Experts/Expertos:

Name to be determined / Nombre por determinar Trinidad and Tobago / Trinidad y Tabago	Tel.: + E-mail
To be determined / Por determinar	Tel.: + E-mail

- G. PROGRAMME: Aeronautical Information Management (AIM)**
PROGRAMA: Gestión de la Información Aeronáutica (AIM)
Coordinator/Coordinador: ICAO / OACI
- G2 PROJECT: Aeronautical Information/Data Management**
PROYECTO: Gestión de información/datos aeronáuticos
- CAR To be determined / A determinarse Tel.: +**
Coordinator/Coordinador: Mexico / México E-mail
- SAM To be determined / A determinarse Tel.: +**
Coordinator/Coordinador: E-mail

Experts/Expertos:

Name to be determined / Nombre por determinar Trinidad and Tobago / Trinidad y Tabago	Tel.: + E-mail
To be determined / Por determinar	Tel.: + E-mail

G.	PROGRAMME:	Aeronautical Information Management (AIM)	
	PROGRAMA:	Gestión de la Información Aeronáutica (AIM)	
	Coordinator/Coordinador:	ICAO / OACI	
G3	PROJECT:	Development of the quality specifications applicable to the AIM digital environment	
	PROYECTO:	Elaboración de las especificaciones de calidad aplicables al entorno digital AIM	
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Experts/Expertos:

Name to be determined / Nombre por determinar Trinidad and Tobago / Trinidad y Tabago	Tel.: + E-mail
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Agenda Item 5 **Other Issues**

5.1 The Meeting recalled that for the implementation of the AIS to AIM Transition Roadmap, States and ICAO have foreseen a plan in three phases:

- First phase — Consolidation
- Second phase — Going digital
- Third phase — Information management

5.2 In addition, it was pointed out that several CAR/SAM Regions States have not yet completed the first phase of implementation, which encompasses in the roadmap the steps of *surveillance of the different areas among States regarding ICAO Annexes 4 and 15, Surveillance of compliance of AIRAC regulations, Quality, and Execution of WGS-84*.

5.3 The Meeting observed that among the Phase 1 roadmap steps there is the implementation of quality programmes, which will ensure the data quality that will serve the final user. Taking this into account, it is a matter of priority that ISO 19100 series of standards are fully implemented regarding the geographic data quality.

5.4 In addition, it was acknowledged that within the framework of geographical-cartographical information and in accordance with current civil aviation needs, it is required to adopt a Quality Management System in order to establish a continuous improvement within cartographic organizations and the user community, thus enabling them to understand the characteristics and potential of the cartographic product they use.

5.5 The International Standards Association (ISO) 211 Technical Committee 211 has developed applicable regulations to geographical data. In particular, ISO standards 19113 and 19114 have been created with the purpose of conceptualizing, measuring and managing geographical data and products throughout all cartographic processes. Likewise, the ISO 19115 metadata application has been disseminated and it enables data and quality description.

5.6 Considering the abovementioned, the Meeting agreed to request GREPECAS to use the fast track mechanism to approve the following draft conclusion:

DRAFT
CONCLUSION 13/3 **ELECTRONIC TERRAIN AND OBSTACLE DATA SUPPLY**
(e-TOD)

That States and Territories of the CAR/SAM regions take urgent actions to ensure:

- a) the electronic representation of WGS-84 geodetic data in aeronautical charts in order to support Performance Air Navigation (PBN), and
- b) the terrain and obstacle electronic data availability of high quality and integrity, as required by ICAO Annex 15.

5.7 The United States representative commented on the importance to reduce human intervention to the minimum in all data management processes. Furthermore, the JEPPESEN representative stressed out the relevance to determine WGS-84 information not only to international aerodromes but also to domestic aerodromes, considering the use of new navigation technologies by the user community.