



International Civil Aviation Organization

CAR/SAM Regional Planning and Implementation Group (GREPECAS)

Tenth Meeting of the GREPECAS Aeronautical Information Services Subgroup (AIS/MAP/SG/10)

Caracas, Venezuela, 26 February - 02 March 2007

AIS/MAP/SG/10-WP/16

11/01/06

Agenda Item 5: Review of administrative aspects of the AIS/MAP Subgroup
5.1 Review of the Terms of Reference and Work Programme of the
AIS/MAP Subgroup and its Task Forces.

AIS/MAP/SG TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION

(Presented by the Secretariat)

SUMMARY

This working paper presents, for review by the Meeting, the revised version of the Terms of Reference, Work Programme, and composition of the AIS/MAP Subgroup, in accordance with the agreements made by the GREPECAS Administration Coordination Group at its 6th meeting (ACG/6). Likewise, a review of the contributory bodies of the Subgroup is presented for consideration by the Subgroup, in order to integrate the work of the existing task forces so that they may unify their activities.

References:

- Report of the Ninth Meeting of the Aeronautical Information Services Subgroup (AIS/MAP/SG/9), (Santo Domingo, Dominican Republic, 13-17 June 20).
- Report of the Thirteenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS), (Santiago, Chile, 14-18 November 2005).
- Report of the Sixth GREPECAS Administration Coordination Group Meeting (ACG/6), (Lima, Perú, 2-3 March 2006).

1 Background

1.1 The Thirteenth Meeting of GREPECAS reviewed and approved the Terms of Reference, Work Programme and composition of the Subgroup, in accordance with the report of the Ninth Meeting of the AIS/MAP Subgroup. The Terms of Reference, Work Programme and Subgroup composition were reviewed again and amended by the GREPECAS Administration Coordination Group (ACG) during its Sixth Meeting, as shown in **Appendix A** to this working paper. The ACG determined that several tasks required input from Headquarters (HQs) before any action could be taken by the group. It was understood that the updated work programme would reflect this fact.

1.2 Likewise, the Ninth Meeting of the AIS/MAP Subgroup approved the Terms of Reference and Work Programme of the existing Task Forces, which are related to the activities of the Quality Management Task Force (QM/TF) and Automation and AIS Database Task Force (DB/AUTO/TF), and also integrates the AIS Database Working Group and ICAO/PAIGH Aeronautical Charts Working Group. For ease of reference they are included in **Appendix B** to this working paper.

2 Discussion

2.1 Taking into account that in accordance with the GREPECAS Procedural Handbook all the contributory bodies of the Group should review and update the Terms of Reference and Work Programme during the last meeting held before to the next meeting of GREPECAS, and considering the agreements reached at the ACG/6 Meeting, the Meeting should review Appendix A in order to submit to GREPECAS.

2.2 Furthermore, the Quality Management Task Force (QM/TF), during its second meeting, suggested a revision of its Terms of Reference and Work Programme for review and approval of the Subgroup as shown in Attachment 4 to Appendix A to WP/05.

3. Suggested action

3.1 The Meeting is invited to:

- a) note and examine the contents of this working paper;
- b) adopt the Terms of Reference and the Work Programme agreed upon by the ACG for the Subgroup; and
- c) update the Terms of Reference and Work Programme of the Task Forces.

APPENDIX A**AERONAUTICAL INFORMATION SERVICES AND AERONAUTICAL CHARTS SUBGROUP
(AIS/MAP/SG)****1. Terms of Reference**

The mission of the GREPECAS AIS/MAP Subgroup is to inform the GREPECAS of the strategy, study and development of all the aeronautical information-related activities. Additionally, it will supervise and watch all the processes of development and implementation of the planned aeronautical information projects:

- a) To plan the development of requirements and strategies to adopt in the CAR/SAM Regions the standardized conceptual aeronautical information models accepted by ICAO for the electronic exchange of aeronautical information/data of the operational systems and their mutual inter-functionalities.
- b) To plan the updating of the AIS/MAP staff training programmes in accordance with the SARPs, ICAO guidelines and the new requirements introduced in Annexes 4 and 15, aimed at providing AIS Services in a digital data electronic interchange environment, ensuring their integrity and quality.
- c) To develop strategies for establishing requirements for an AIM in the CAR/SAM Regions in line with the elements of the global operational concept.
- d) To plan the application of quality systems in the CAR/SAM AIS in accordance with ISO 9000 standards, contributing to the implementation of the AIS/MAP Quality Management System required in Annex 15 and in the Recommendations of the CAR/SAM/3 RAN Meeting, emphasizing the assessment and suggesting implementation plans of the system in question, in accordance with the relevant ICAO guidelines.
- e) To study aspects related with the maintenance of the CAR/SAM Air Navigation Plan (Part VIII, AIS) to ensure its effective implementation and the evolution of global AIS/MAP requirements.
- f) To foster and follow up the implementation of the AIS/MAP services required in the CAR/SAM Air Navigation Plan, with special emphasis on the identification, evaluation and proposal, according to established procedures, of the corresponding corrective actions to solve the deficiencies affecting air operations.
- g) To carry out a permanent coordination with GREPECAS Contributory bodies, in order to ensure a suitable integration of all the tasks that contribute to CNS/ATM implementation.
- h) To develop the project document to manage the creation or extension of a Regional CAR/SAM Technical Cooperation Project to support the development of the AIM as a key element for ATM.

2. Work Programme

| TASK NUMBER | TASK DESCRIPTION | PRIORIT Y | DATE | |
|----------------------|---|---------------|----------------------------------|----------------------------------|
| | | | START | END |
| AIS/MAP/1 | CAR/SAM AIS database (CASADAB) system development with AIM approach and based on the conceptual model. (Note: Stand by for HQ's SARPS and guidance material) | BA | 2nd half 2003 | STAND BY |
| AIS/MAP/2 | <u>Global data model for aeronautical information interchange.</u> Define general technical criteria for the automated processing of the Integrated Aeronautical Information Package by AIS services. (Note: Stand by for HQ's SARPS and guidance material) | B | 2nd half 2003 | STAND BY |
| AIS/MAP/3 | Develop specialized AIS/MAP training programmes based on the new role of AIS/MAP personnel within CNS/ATM environment (GREP/12, TRAIN TF/8 - (Note: Stand by for HQs guidance material)). | B | 2003 | STAND BY |
| AIS/MAP/4 | Responsibilities and functions of the AIS/MAP specialist, based on the new role of AIS/MAP personnel within CNS/ATM environment (Note: Stand by for HQs guidance material). | AB | 2003 | STAND BY |
| AIS/MAP/5 | Review and update part VIII-AIS/MAP of the CAR/SAM ANP Vol. I ANP Basic and Vol. II FASID | A | 2003 | Dec. 2008 <u>2006</u> |
| AIS/MAP/6 | Develop an ICAO/IPGH TC draft project for the production and implementation of the 1:000,000 and 1:500,000 VFR aeronautical charts <u>in digital format for regional covering</u> . Reactivation of the PAIGH Aeronautical Charts Committee. | A | Feb. 2005 | Feb. 2007 |
| AIS/MAP/7 | Performance actions for the coordination determination and implementation of the WGS 84 coordinates of the points of the boundaries of FIRs. <u>Prepare a programme for the applications of the elements of human factors into the AIS services.</u> | A | Jul.-Feb. 2005 | Dec. 200 <u>8</u> 6 |
| AIS/MAP/8 | Prepare a programme for the applications of the elements of human factors into the AIS services <u>Study AIS, MET and FLP products in support of the integrated provision of a pre-flight and in-flight information service.</u> | AB | Feb. 2005 <u>2003</u> | Dec. 200 <u>6</u> 8 |

| TASK NUMBER | TASK DESCRIPTION | PRIORITY | DATE | |
|-------------|---|-----------|--------------------------------------|---------------------------------------|
| | | | START | END |
| AIS/MAP/9 | <p>Study AIS, MET and FLP products in support of the integrated provision of a pre-flight and in-flight information service. Carry out planning activities for AIS/MAP Implementation</p> <p><u>9a. Implementations of NOTAM Data Banks utilizing common query protocols</u></p> <p><u>9b. Planning of the Implementation of the Electronic AIP</u></p> <p><u>9c. Planning of the Implementation of the quality management system in the AIS services</u></p> <p><u>9d. Assist States on the development of action plans for the solution of AIS/MAP deficiencies</u></p> <p><u>9e. Planning of the Implementation of the WGS-84 aeronautical charts, using GIS technology and Terrain digital modeling system (TDMS)</u></p> | <u>BA</u> | 2003 <u>Jul. 2005</u> | Dec. 2007 |
| AIS/MAP/10 | <p>Carry out planning activities for AIS/MAP Implementation</p> <p>10a. Implementations of NOTAM Data Banks utilizing common query protocols</p> <p>10b. Planning of the Implementation of the Electronic AIP</p> <p>10c. Planning of the Implementation of the quality management system in the AIS services</p> <p>10d. Assist States on the development of action plans for the solution of AIS/MAP deficiencies</p> <p>10e. Planning of the Implementation of the WGS-84 aeronautical charts, using GIS technology and Terrain digital modelling system (TDMS)</p> <p><u>Study and planning for the application of the AIM Concept in the CAR/SAM Regions (GREPECAS 13)</u></p> | <u>AB</u> | Jul. <u>Jul-Nov. 2005</u> | Dec. 2007 <u>Oct. 2008</u> |

3. Priority

- A** High priority tasks, on which work should be speeded up.
- B** Medium priority tasks, on which work should commence as soon as possible, but without detriment to priority **A** tasks.
- C** Tasks of lesser priority, on which work should commence as time and resources allow, but without detriment to Priority **A** and **B** tasks.

4. Composition

Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, France, Paraguay, Peru, Spain, Trinidad and Tobago, United States, Venezuela, COCESNA, IATA, and PAIGH.

5. **Chairperson**

Chairman: Mr.Sergio García Jorquera (Chile)
Vice-Chairman: ~~Mrs. Mirta Crespo (Cuba)~~

APPENDIX B**TERMS OF REFERENCE AND WORK PROGRAMME OF THE
AIS/MAP QUALITY MANAGEMENT TASK FORCE***Refer to Attachment 4 to Appendix A to WP/05***TERMS OF REFERENCE AND WORK PROGRAMME OF THE
AUTOMATION AND AIS DATABASE TASK FORCE****(This Task Force includes the Ais Database Working Group and the ICAO/PAIGH Aeronautical
Charts Working Group)****1. Terms of Reference**

- a) To promote the development and standardization of technical, operational and administrative requirements for the establishment and use of national AIS/MAP Automation systems, in order to create AIS/MAP Data Bases and AIM for the CAR/SAM Regions.
- b) To plan and promote among the CAR/SAM Region States electronic aeronautical information/data exchange, and to base this exchange in the technical requirements set by GREPECAS and ICAO.
- c) To develop the requirements for the implementation of the Geographic Information System (GIS) for the production of Electronic Aeronautical Charts based on WGS-84 information/data, in support of the CNS/ATM Systems and the Global Navigation Satellite System (GNSS) including the Flight Management System (FMS).

2. Work Programme

| TASK NUMBER | TASK DESCRIPTION | PRIORITY | DATE | |
|---------------------|--|----------|-------|---------------------|
| | | | START | END |
| DB-AUTO-TF/1 | Take pertinent actions for the establishment and utilization of National AIS/MAP Data Banks (NASCs) in the CAR/SAM Regions; and analyze the problems and their possible solutions to achieve the referred objective. | A | 2003 | 2005 (completed) |
| DB-AUTO-TF/2 | Study and develop reference technical documentation to permit the possible use in CAR/SAM Regions of ICAO broadcast (World Area Forecast System/WAFS) for the transmission of aeronautical information. | A | 2003 | 2005 (completed) |

| TASK NUMBER | TASK DESCRIPTION | PRIORITY | DATE | |
|---------------------|---|----------|-------|---------------------|
| | | | START | END |
| DB-AUTO-TF/3 | Study and develop a implementation plan for the AIS/MAP CAR/SAM (CASADAB) data base and exchange procedures, using ICAO standards. | A | 2003 | 2005 (completed) |
| DB-AUTO-TF/4 | Develop technical specifications to promote the production of WGS-84 electronic aeronautical charts, using the technology of the geographical information system (GIS) and the terrain digital modelling system (TDMS), in support of GNSS/FMS and CNS/ATM systems. | A | 2003 | 2010 |
| DB-AUTO-TF/5 | Define general technical criteria for the automated processing of the Integrated Aeronautical Information Documentation by CAR/SAM States. | A | 2003 | 2005 (completed) |
| DB-AUTO-TF/6 | Carry out relevant studies for the harmonization and automated processing of AIS, MET and FLP products to support the integrated provision of pre-flight and in-flight service. | A | 2003 | 2005 (completed) |
| DB-AUTO-TF/7 | Study and develop an implementation plan to introduce AIM for the CAR/SAM Regions. | A | 2005 | 2007 |
| DB-AUTO-TF/8 | Study and develop an implementation plan for electronic AIS/MAP data exchange, using ICAO standards. | A | 2005 | 2008 |

3. Composition

Argentina, Bolivia, Brazil*, Chile, Colombia, Costa Rica, Cuba, Ecuador, Mexico, Panama, Peru, Spain, Uruguay, COCESNA, and NGA.

* *Rapporteur*: Carlos Pellegrino

Note: The Substitute Rapporteur will be designated at the next meeting of the Task Force.

**TERMS OF REFERENCE AND WORK PROGRAMME OF THE
AIS DATABASE WORKING GROUP**

1. Terms of Reference

- a) To promote the development and standardization of technical, operational and administrative requirements for the establishment and use of national AIS/MAP Automation systems, in order to create AIS/MAP Data Bases and AIM for the CAR/SAM Regions.
- b) To plan and promote among the CAR/SAM Region States electronic aeronautical information/data exchange, and to base this exchange in the technical requirements set by GREPECAS and ICAO.
- c) To meet and coordinated with Aeronautical Chart Board to develop the requirements for the implementation of the Geographic Information System (GIS) for the production of Electronic Aeronautical Charts based on WGS-84 information/data, in support of the CNS/ATM Systems and the Global Navigation Satellite System (GNSS) including the Flight Management System (FMS).

2. Work Programme

| TASK NUMBER | TASK DESCRIPTION | PRIORITY | DATE | |
|--------------------|--|----------|-------|------|
| | | | START | END |
| AIS DB-WG/1 | Study and develop an implementation plan to introduce AIM for the CAR/SAM Regions. | A | 2005 | 2007 |
| AIS DB-WG/2 | Study and develop an implementation plan for electronic AIS/MAP data exchange, using ICAO standards. | A | 2005 | 2008 |

3. Composition

Argentina, Bolivia, Brazil*, Chile, Colombia, Costa Rica, Cuba, Ecuador, Mexico, Panama, Peru, Spain, Uruguay, COCESNA, and NGA.

* **Rapporteur:** Carlos Pellegrino

Note: The Substitute Rapporteur will be designated at the next meeting of the Task Force

**TERMS OF REFERENCE AND WORK PROGRAMME OF THE ICAO/PAIGH
AERONAUTICAL CHARTS WORKING GROUP**

1. Terms of Reference

- a) To establish and conduct a joint project with PAIGH and other national and international organizations to develop processes and to determine database and Geographic Information System technology capable of producing electronic aeronautical charts in the CAR/SAM Region that meet ICAO Annex 4 standards.
- b) To determine sources of adequate digital chart data available, such as terrain, to support the economic production of the full range of electronic charts.
- c) To develop a plan, with achievable objectives in phases, for the funding and production of Electronic Aeronautical Charts based on WGS-84 in support of the CNS/ATM Systems and the Global Navigation Satellite System (GNSS) including the Flight Management System (FMS); the plan would provide for:
 - a training program for CAR/SAM States to ensure adequate human resources are in place to support the initial ICAO/PAIGH project and the continual maintenance of the charts,
 - the funding and the establishment of database and GIS systems capable of producing and maintaining electronic charts
 - the achievable time-phased production of charts based on priority, and
 - the follow-on maintenance of the charts.
- d) meet and coordinate with the AIS/DB/AUTO/TF concerning database issues pertaining to electronic aeronautical chart support and production.

2. Work Programme

| TASK NUMBER | TASK DESCRIPTION | PRIORITY | DATE | |
|-------------|--|----------|-------|------|
| | | | START | END |
| MAP-WG/1 | <p>Establish the Composition of the ICAO/PAIGH Aeronautical Charts Working Group with Experience in Aeronautical Charting</p> <p>a) Recruit ICAO and PAIGH members experienced in cartography, digital map or chart production, WGS 84, and digital terrain modeling to participate in the Task Force; invite the Cartographic and Geographic Institutes of the CAR/SAM Region to participate.</p> <p>b) Arrange joint AIS DB AUTO/MAP Task Force meetings to share database expertise between the participants and to coordinate charting database requirements.</p> | A | 2005 | 2006 |

| TASK NUMBER | TASK DESCRIPTION | PRIORITY | DATE | |
|-------------|---|----------|-------|------|
| | | | START | END |
| MAP-WG/2 | <p>Determine Methodology for Electronic Chart Production</p> <p>a) Identify existing technology capable of producing electronic charts that meet the ICAO Annex 4 standards.</p> <p>b) Determine that methodology most achievable for a Joint ICAO/PAIGH electronic charting project and follow-on chart maintenance in the CAR/SAM Region</p> | A | 2005 | 2007 |
| MAP-WG/3 | <p>Prepare a Plan to Produce Electronic Charts Based on the Priority of each Chart to be Produced and with Achievable Milestones</p> <p>a) Determine the priority of charts to be produced,</p> <p>b) Review past PAIGH and ICAO plans for the production of aeronautical charts and other example regional development plans to gain background for the development of a truly achievable plan,</p> <p>c) Prepare a plan that includes background on the recommended production process, the steps necessary to compile the data required, the quality process, and achievable milestones for production of charts based on priority requirements.</p> | A | 2005 | 2007 |
| MAP-WG/4 | <p>Define Sources or Methods for Obtaining Electronic Terrain, Obstacle, Geodetic, Aeronautical and Other Cartographic Base Data Necessary to Produce Electronic Charts</p> <p>a) determine data sources available within the State civil aviation authority,</p> <p>b) determine the availability of digital data from State Cartographic and geographic Institutes,</p> <p>c) determine the availability of international organization and commercial sources of data.</p> | A | 2005 | 2007 |
| MAP-WG/5 | <p>Seek Sources for Funding and Support for a Joint ICAO/PAIGH Electronic Charts Project in the CAR/SAM Regions</p> <p>a) gain State aviation authority commitment to the joint project and determine that portion of funding that may be sustained by each of the CAR/SAM Region States,</p> <p>b) determine States and organizations that can provide data and production resources,</p> <p>c) determine States and organizations that will assist in the funding of the project such as the World Bank, International Development Bank and the U.S. Trade Development Agency;</p> <p>d) determine the most effective use of Special Implementation Projects (SIP) funding resources</p> | A | 2005 | 2007 |

| TASK NUMBER | TASK DESCRIPTION | PRIORITY | DATE | |
|-------------|--|----------|-------|------|
| | | | START | END |
| MAP-WG/6 | <p>Develop Implementation Plan for the Production of Electronic Charts</p> <p>a) plan production milestones based on the available technology, human resources, funding, data, and chart priority,</p> <p>b) plan follow-on chart maintenance milestones and schedules based on the available technology, human resources, funding, data, and chart priority.</p> | A | 2005 | 2008 |

3. Composition

Argentina, Brazil, Chile*, Cuba, COCESNA, Jeppesen.

* *Rapporteur*: Viviana Barrientos

Note: The Substitute Rapporteur will be designated at the next meeting of the Task Force

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