

## **Executive Summary for the Fifth Workshop/Meeting of the SAM Implementation Group Regional Project RLA/06/901**

The Fifth Workshop/Meeting of the SAM Implementation Group (SAM/IG/5) was held at the premises of the ICAO South American Regional Office in Lima, Peru, from 10 to 14 May 2010, under the auspices of Regional Project RLA/06/901.

The meeting was attended by 54 participants from 10 States of the SAM Region Argentina, Bolivia, Brazil, Chile, Colombia, Panamá, Paraguay, Perú, Uruguay and Venezuela, 1 State of NAM Region, United States, and 4 International Organizations, ARINC, IATA, (including LAN and TAM), IFALPA and Washington Consulting Group.

Mr. Hernán Johnny Colman Quintana, Civil Aviation Director of Paraguay, acted as Chairman of the Meeting and Mr. Paulo César Vila Millones, delegate from Peru, as Vice President.

Following is a summary of the agreements reached regarding the different agenda items:

### **Agenda Item 1: Follow up to Conclusions and Decisions adopted by SAM/IG**

With the information provided by the Secretariat and States on the works carried out with regard to conclusions and actions adopted, the status of compliance was updated, as shown in **Appendices A, B, C, D and E** of Agenda Item 1 of the report. The meeting also took note of the list of tasks that are related to implementation programmes approved by the Third Coordination Committee Meeting (RCC/3) of Regional Project RLA/06/901. (**Appendices F and G** of Agenda Item 1).

### **Agenda Item 2: Optimisation of the ATS routes**

**Appendix A** to Agenda Item 2 of the report shows the updated list of routes in process that integrate Version 01 of the SAM ATS routes network, and comments, when required. It was agreed that the deadline to present the result of coordination of routes that are part of Version 01 of the SAM ATS routes network is the Second SAM Workshop on ATS Routes Network Optimisation (SAM ATSRO/2).

Also, the meeting agreed that the routes UM661, UM532, UM403, UL780 (realignment of segment Lima/Miami), UM 662 and UM400 (segment Cordoba/Aldeia) be implemented in advance, since these routes have been coordinated for several years. In order to initiate the amendment process to the Basic CAR/SAM ANP, States involved committed to complete the information related with significant points and geographical coordinates for **26 May 2010**.

The meeting also reviewed the action plan associated to the SAM ATS routes network optimisation, which contemplates tasks in charge of defined responsible persons with dates of compliance established. **Appendix D** to Agenda Item 2 of the report shows the revised version.

**Agenda Item 3: Implementation of performance-based navigation (PBN) in the SAM Region**

The meeting reviewed and updated the En-route PBN Action Plan (RNAV5) shown as **Appendix C** to the report on agenda item 3. In the analysis of this action plan, four related were adopted, as follows:

<b>Conclusion SAM/IG/5-1</b>	Training programme and documentation for air traffic controllers and AIS operators
<b>Conclusion SAMIG/5-2</b>	PBN/RNAV5 seminars for operators
<b>Conclusion SAMIG/5-3</b>	Data Collection
<b>Conclusion SAM/IG/5-4</b>	Implementation of Continuous Descent Operations

**Agenda Item 4: Standards and procedures for performance-based navigation operations approval**

Under this agenda item, the content of the following circulars was revised AC 91-001 Aircraft and Operators Approval for RNAV 10 Operations (RNP 10), AC 91-002 related to Aircraft and Operators Approval for RNAV 5, CA/91-004, Aircraft and Operators Approval for RNP4 Operations.

After the analysis, some amendments were proposed to improve understanding of the above-mentioned ACs and additionally formulated **Conclusion SAM/IG/5 -5 - FDE availability prediction programme.**

It revised the pending activities related to OPS/AIR proposing some modifications in the work plan.

In the application of national standards for operators and aircraft approval for PBN operations, it formulated **Conclusion SAM/IG/5-6 – Application of national standards for operators and aircraft approval for PBN operations.**

The Secretariat was requested that, as far as possible should carry out a third course for operators approval and aircraft during 2010, considering simultaneously the RNAV and RNP specifications, so that participating inspectors acquire the required capabilities in one single training period.

During the analysis of the PBN action plan, note was taken that it was necessary to establish a data base with RNAV5 aircraft approval and operators. In this connection, a form was evaluated for further assessment of CARSAMMA. The draft form is shown in **Appendix A** to the report on agenda item 4.

The meeting evaluated the need that flight crews and dispatchers knew limitations under which the operation of a specific navigation specification was authorised, so that they could compare the capabilities of their aircraft with limitations that might be established for some routes or airspaces and then adequately plan its flight. In view of this requirement, as per the experience of the OPS/AIR group, proposed to the meeting to incorporate a draft roadmap for operations specifications for an RNAV5 authorization, depending on the aircraft equipment. This document is included as **Appendix B** to the report on agenda item 4.

**Agenda Item 5: Implementation of air traffic flow management (ATFM) in the SAM Region**

The Meeting recalled that the SAM/IG/02, 03 and 04 Workshops/Meetings, among other matters, analysed the matters related with ATFM implementation in the South American Region and the related activities. The meeting took note of the ATFM course planned, which was held in Rio de Janeiro, Brazil, from 22 to 26 March 2010 with the attendance of 18 experts of the Region. The First CDM Workshop was also carried out from 29 to 31 March 2010, with the attendance of 27 experts. Both events were carried out at the Air Navigation Management Centre, CGNA, facilities in Brazil, Rio de Janeiro.

One of the most highlighting matters in the ATFM course was the exchange of information among concerned States, and in this connection, it was agreed to initiate weekly teleconferences of a pre-operational nature, in order to put into practice the procedures analysed and studied during the referred course. In this initial phase, the focal points *for ATFM coordination*, participating in the teleconference will send the international briefing form completed with their data to other participants or to any alternative e-mail, with an advance of 30 minutes before the teleconference (14, 00 UTC), to maximize the efficiency of it. This procedure will start to be implemented from 8 June 2010. The ATFM Implementation Group considered these ATFM pre-operational teleconferences continue to be weekly, due to communications infrastructure problems faced by some States. Likewise, it was of the opinion that it would be convenient that starting SAM/IG/6 Meeting, an analysis of the daily application of these teleconferences be made. In this connection, the Meeting formulated **Conclusion SAMIG/5-7 - ATFM Teleconferences in the SAM Region**.

The Meeting also studied different alternatives that might enable direct participation of States that do not have free-charge telephone costs. The alternative analysed was the use of the REDDIG. In this connection, the Meeting requested that the Implementation Group for the improvement of communications, navigation and surveillance (CNS) capabilities to include within its activities a study contemplating the alternatives to carry out teleconferences to support Regional ATFM requirements.

**Appendix D** to Agenda Item 5 report shows an updated Action Plan for the Implementation of ATFM in Airports and Airspace (ATC Sector) of the SAM Region.

Considering the need to promote seminars and courses to the ATFM community, taking into account the concept Demand Analysis and Airport Capacity for the implementation of ATFM, the Secretariat is requested to consider in year 2011, under Project RLA/06/901, the inclusion of the Course Runaway Capacity Calculation and ATC Sector, to be held in the first semester.

**Agenda Item 6: Assessment of operational requirements in order to determine the implementation of communications and surveillance (CNS) capability improvements for en-route and terminal area operations**

*Follow-up to the interconnection of AMHS systems in the SAM Region*

The Meeting took note of the progress in the interconnection of the AMHS systems between the different States in the Region. **Appendix A** to this Agenda Item presents the action plan for the interconnection of AMHS systems, revised by the Meeting.

*Study for the regional implementation of a new communications system*

The Meeting took note of a preliminary analysis made to carry out a study on the implementation of a regional satellite, ground, or mixed (satellite and ground) digital network, with views to support current voice and data aeronautical fixed services requirements, radar data and flight plans exchange, as well as ATN ground-ground applications among SAM States/Territory, scheduled to be implemented in the short and medium term. The preliminary analysis took the following parameters as a premise for the study: availability, BER, Band Width (BW), current technology (equipment installed), types of services to be implemented and a unique communications service provider. In this respect, the action plan for the study of a SAM digital network was revised accordingly. The revised action plan is shown in **Appendix B** to this Agenda Item.

*Study of the calculated line-of-sight coverage of VOR/DME stations in the SAM Region*

The Meeting took note of the study carried out on the calculated line-of-sight coverage of VOR/DME stations in the SAM Region. The results of the task carried out include, for each of the stations analysed, the following information:

- a) Obstacle database;
- b) An Excel degree-by-degree coverage database up to FL250;
- c) A polar coverage map up to FL250, with a 5-degree filter; and
- d) Conversion of the Excel database to KML in order to permit the display of VOR/DME line of site coverage in Google Earth.

During the Meeting, a CD with information indicated in the above paragraph was handed over. To this effect, the Meeting formulated **Conclusion SAMIG/5-8** - Review of the SAM VOR/DME stations line-of-sight coverage database

The Meeting considered that the study on line-of-sight coverage should be extended to include coverage at levels above FL250. Likewise, the Meeting considered that a coverage diagram for ground-air communications should be prepared, as well as for radar surveillance systems.

*Information on SAM States CNS improvements*

The Meeting was informed on improvements introduced by SAM States in the CNS environment.

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

The Meeting examined the progress made in the activities scheduled for the interconnection of automated systems between Argentina-Uruguay, Argentina-Brazil and Brazil-Uruguay, on the basis of the Memoranda of Understanding (MoU) that were drafted and signed in follow-up to Conclusion SAM/IG/3-8 - *Preparation of specific implementation plans for the interconnection of automated systems.*

Argentina informed the meeting that on the week of 12 April 2010 the radar data information from Quilmes was arriving to Uruguay, while Uruguay informed the Meeting it was working to carry the radar data information from Durazno to Ezeiza, estimating to finish by March 2011.

*Interconnection of automated systems between Argentina and Brazil*

The Meeting noted that the MoU signed between the aeronautical administrations of Argentina and Brazil, specified that the interconnection of automated systems would be carried out between the Resistencia and Curitiba ACCs. With regard to the exchange of radar data, Argentina would be carrying information of the Resistencia secondary radar to Curitiba, while Brazil could carry information from the Santiago and Foz de Iguazu secondary radars to Resistencia.

*Interconnection of automated systems between Brazil and Uruguay*

The Meeting took note that the interconnection of automated systems between Brazil and Uruguay. Uruguay informed it was working to enable the sending of radar data from Durazno to the Curitiba ACC. In addition, the Meeting was informed that the Sagitario System with Asterix protocol was being installed in the Curitiba ACC, and that same would be completed by March 2011. In this respect, the MoU was amended by changing the radar data integration date for said date.

*Interconnection of automated systems between Brazil and Venezuela*

During the Meeting, Brazil and Venezuela started a draft for the interconnection of radar data between the ACC Maiquetia and Amazónico ACCs.

*Action plan for the implementation of ATM automated systems*

**Appendix A** to this Agenda Item presents the updated action plan for the interconnection of automated systems in the SAM Region.

***Implementation of the new flight plan format in the SAM Region***

The Meeting took note of the information presented with respect to Amendment 1 to the PANS/ATM, the guidelines for the operation of the new flight plan during the transition phase, and the strategy adopted in the CAR/SAM Regions for implementation of Amendment 1.

The Meeting examined the action plans for the implementation of Amendment 1, prepared by Panamá, Paraguay and Uruguay in follow-up to Conclusion SAM/IG/4-8.

The Meeting examined the table in Appendix E to WP/16, which shows an initial analysis to the impact that the implementation of the new flight plan format will have on the automated systems involved in the flight plan process, formulating **Conclusion SAM/IG/5-9 - Analysis on the impact of Amendment 1 to the PANS/ATM on the automated systems.**

The Meeting recognised the importance that the SAM States designate the people involved in the subject pertaining to the implementation of Amendment 1 to the 15th Edition of the PANS/ATM, to assist to the seminar/workshop to be held in Lima from 13 to 15 September 2010. In this sense, it considered important counting with the presence, at the seminar/workshop, of representatives from companies in the Region developing the logical support for automated systems, for them to report on the evolution of their work and, if possible, to provide a technical/financial evaluation to held States in defining whether it is viable to count during the transition period with both a CURRENT and NEW format processing methods.

**Agenda Item 8: Other business**

**SAM Region Performance-Based Regional Implementation Plan**

The meeting recalled that the GREPECAS CNS/ATM/SG analysed all the information available, and in view that the NAM/CAR Regions have already approved by the Civil Aviation Directors the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) and that the SAM Region is implementing some of the performance objectives approved by GREPECAS, it was of the opinion that the SAM Region should draft a performance-based implementation plan that includes all air navigation areas, as well as the metrics that enable the measuring of performance objectives.

In view of the above, during the Regional Project RLA/06/901 Third Regional Coordination Committee Meeting, a task was proposed for the development of this implementation plan, which was approved by the Meeting. Consequently, during the current year, the assistance of five (5) experts will be requested for the development of a draft document, which would be presented to the SAM/IG/6 Meeting, for its revision and corresponding actions.

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