



**International Civil Aviation Organization
South American Regional Office**

**SECOND WORKSHOP/MEETING OF THE SAM IMPLEMENTATION GROUP (SAM/IG/2)
REGIONAL PROJECT RLA/06/901**

Lima, Peru, 3 to 7 November 2008

Agenda Item 4: Implementation of air traffic flow management (ATFM) in the SAM Region

INITIAL ATFM AIC MODEL

(Presented by ATFM Rapporteur)

Summary

This working paper presents an AIC model in order to disseminate in all ATM Community ATFM concept and Region centralized ATFM implementation process in each State.

References

- Global Air Navigation Plan (Doc. 9750)
- Air Traffic Management Operational Concept (Doc. 9854)
- Report of SAM/IG /1 Meeting
- Report of the ATM/CNS/SG/6 Meeting

1. Introduction

1.1 In the First Workshop/Meeting of the SAM Implementation Group (SAM/IG/1) held in Lima, Peru in the month of April 2008, within Agenda Item 2, Air Traffic Flow Management (ATFM) in the SAM Region, the Action Plan to implement ATFM in the short-term in the SAM Region was adopted.

1.2 Action Plan to implement ATFM in the short-term in the SAM Region, Part A, Airport, in Section 2, Coordination with ATM Community, indicates in paragraph 2.1 the task to Present an initial AIC model in SAM/IG/2 Meeting.

2. **Discussion**

2.1 The decision making concept (CDM), according to Air Traffic Management Operational Concept (Doc. 9854), will permit that all members of the ATM community, especially airspace users, participate in ATM decision making affecting them, applying this concept in all stages of the decision adoption, from long-term planning activities to real time operations, being an essential element of ATM operational concept.

2.2 An initial ATFM AIC model is being attached as **Appendix A** to this working paper, in order to disseminate in the ATM community the implementation process initiated by the CAR/SAM region and ATFM CONNOPS.

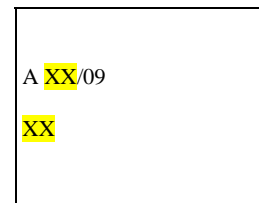
3. **Suggested action**

3.1 The meeting is invited to:

- a) Take note of the information attached as Appendix A to this Working Paper.
- b) Review and amend, if necessary, the initial ATFM AIC model.
- c) Approve ATFM AIC model

APPENDIX A

STATE XXX



A XX. IMPLEMENTATION OF AIR TRAFFIC FLOW MANAGEMENT (ATFM) IN THE CAR/SAM REGIONS

1. ATFM Concept

1.1 The ATFM is a service established in order to contribute to a safe, orderly and expeditious air traffic circulation, ensuring that the maximum possible of ATC capacity is used, and that air traffic volume is compatible with capabilities declared by the ATS competent authority.

2. Concept of demand and capacity

2.1 The function of balancing demand and capacity shall consist in reducing the effects of limitations of the ATM system to a minimum. The balance between demand and capacity will enable to evaluate the air traffic flows and capacities of all the system, with a view to timely putting the necessary measures into practice. A process of collaboration shall enable the efficient management of air traffic flows through the use of the information on air traffic circulating through all the systems, the weather conditions and means available.

2.2 The balance between demand and capacity shall enable airspace users to participate in the ATM system in an optimal manner, mitigating at the same time conflicts related to the airspace and aerodrome capacity. The cooperative utilization of the instruments supporting the decisions shall ensure a more efficient use of the airspace resources, shall provide the greater possible access to these airspace resources, shall provide the greater equitable access to all users, and shall ensure that the airspace resources demand exceeds its capacity.

3. Historical summary

3.1 ICAO CNS/ATM systems received the support of the Tenth Air Navigation Conference held in 1991 at ICAO Headquarters, in Montreal, Canada. That same year, the CAR/SAM Regional Planning and Implementation Group (GREPECAS) started to work, with a view to the regional application of this new concept of air navigation services.

3.2 Further, the States, Turing the Eleventh Air Navigation Conference – (AN-Conf/11, Montreal, September 2003), supported and approved the new ICAO ATM global operational concept, which encourages the implementation of a new services management that permits the achievement of an operationally continuous regional airspace, through the application of a series of ATM functions.

3.3 According to the guidance principles established by ICAO Council with respect to the facilitation of the inter-regional harmonization, regional plans for CNS/ATM systems implementation in the Regions had to be prepared in accordance with general profiles defined in the Air Navigation Global Plan for CNS/ATM Systems. After a thorough analysis of the guidance principles of this Global Plan for CNS/ATM Systems, the CAR/SAM Planning and Implementation Group (GREPECAS) incorporated characteristics inherent to the CAR/SAM Regions, using as a basis the definitions of Homogeneous Areas and Main Traffic flows. Homogeneous areas are those airspace portions which have ATM requirements, and similar degrees of complexity, while main traffic flows are those airspaces where there is a significant amount of air traffic.

3.4 From the analysis carried out by ICAO/UNDP Regional Project RLA/98/003, it may be detached that, while in general terms in the CAR/SAM Regions environment there are no traffic congestions currently, requiring a complex flow management, it has been identified that in some airports, and airspace sectors, mainly in special periods and specific hours, where some congestions already exist, should be avoided.

3.5 In view of the above, GREPECAS/12 considered that the early implementation of ATFM shall ensure an optimal air traffic flow towards some specific areas or through them during periods in which demand exceeds or is foreseen to exceed the available capacity of the ATC system. Therefore, an ATFM system should reduce aircraft delays, both in flight and ground and avoid the system to be overloaded. ATFM system shall help the ATC to comply with the objectives and achieve a more effective use of the available capacity of the airspace and airports. ATFM should also ensure that air operations safety is not compromised in unacceptable air traffic congestion levels, and at the same time ensure that air traffic is managed effectively without the application of unnecessary flow restrictions.

3.6 During year 2005, the first meeting of the ATFM-TF was carried out, and the planning process was initiated therein, with the final goal to implement a centralized ATFM unit in the CAR/SAM Regions, and to this end, the principles, functions and requirements on which the CAR/SAM ATFM service would be based, were defined.

3.7 The ATFM/2 meeting held in year 2006 presented the document on Air Traffic Flow Management Operational Concept (CONOPS ATFM) for CAR/SAM Regions. This is oriented, such as expressed by its objective, to provide a high level description of service to be rendered in the CAR/SAM Regions within a determine time horizon. Likewise, it explains the present situation and future situation to be achieved progressively through a series of specific change stages.

3.8 The ATFM CONOPS reflects the expected order of the events that can take place, also it is intended to support and orient planners on the design and gradual development of the ATFM system to provide safety and effectiveness, as well as to guarantee an optimum air traffic flow towards determined areas or through them, during excessive demand periods or when the demand could exceed ATC system available capacity.

3.9 Since year 2008 the SAM Implementation Group coordinates the necessary tasks for the concretion of the established objective, in coordination with all States integrating the region.

4. Parties involved in ATFM – CDM Concept

4.1 The implementation and functioning future process of centralized ATFM, of FMU, and FMP in each one of the States, involves ATFM community participation, which includes ICAO, international organizations, air space users, associations, operators, air transit services providers,

airport operators, military aviation and the entity entrusted by States for the provision of a unique central dependency for affluence management.

4.2 Members of ATFM community participate and cooperate in the planning, development, use, regulation, operation and maintenance of ATFM system, within the framework of the concept of Cooperation Decision Making (CDM), set by ICAO in the Operational Concept of ATM Global Air Transit Management (Doc. 9854 AN/458), Global Air Navigation Plan (Doc. 9750 AN 963), which application will allow to achieve an acceptable solution in which all participants' needs and ATM system effective operation will be considered.

5. Access to Regional ATFM Information

5.1 In GREPECAS/15 meeting, amendments to CONOPS ATFM CAR/SAM were made, which new edition (1.2 version) will be put in Lima and Mexico Regional Offices web pages (<http://www.lima.icao.int/> - <http://www.icao.int/nacc/>), same that can be looked up by ATFM Community members for the active participation of the process that involves the implementation of centralized ATFM and of FMU and FMP in each one of the CAR/SAM regions States.
