



Agenda Item 2: Global and inter-regional activities

2.1 Inter-regional and intra-regional CNS/ATM activities and coordination

ATFM IMPLEMENTATION IN COLOMBIA

(Presented by Colombia)

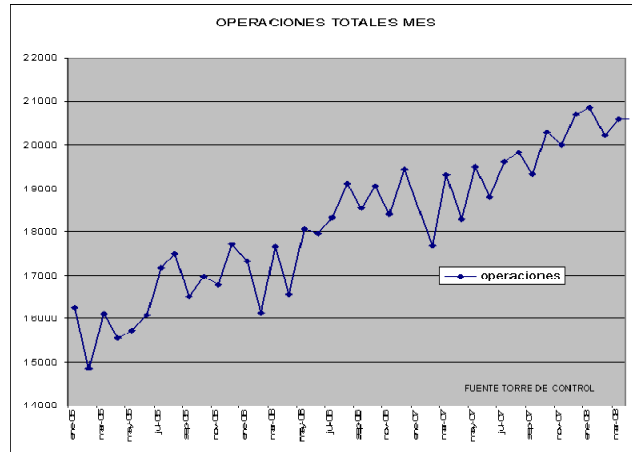
SUMMARY

This working paper assures the decision of Colombia to continue the development of its flow unit - CFMU, taking into account the income in air traffic management and as a regulator of the accelerated growth of operations in Colombia.

1. Introduction

1.1 The operation of Bogota's Eldorado airport introduced a congestion problem at the end of February 2008, those related aspects to this particular condition are due to several contributing factors, and each of them affected in a particular form of the situation.

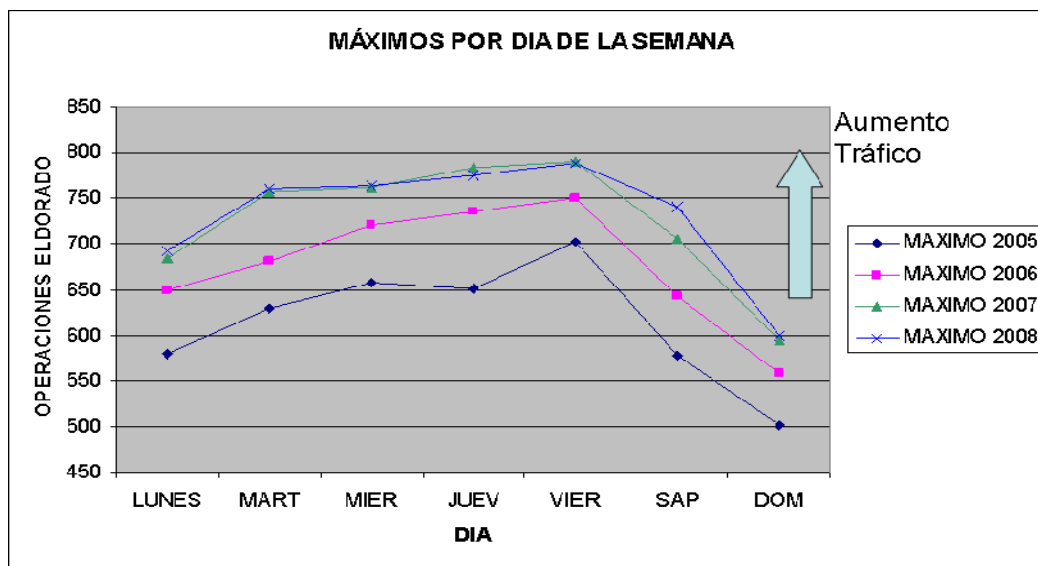
1.2 The growth of operations in Colombia, both in terms of flights, national operation, but in particular to Eldorado Airport contributed decisively to an unbalanced condition between capacity and demand for Air Traffic services, joined to an environmental curfew operation that does not allow the use of the second runway from 22:00 local time and limits the operation of the aerodrome over the city until 06:00 local time, growth is shown below:



1.3 Weather Conditions affected the operation by three events that took place on a continuing basis, the wind change that forced loiter over the city to land, with an additional delay, the presence of low visibility in the morning hours, and storms on the station or rains that are developing in the afternoon, all of this together affected the separations of aircraft and consequently impacted the capacity of the Eldorado airport.

1.4 Other Operational conditions: This factor involves aircraft operation with restrictions to operate in the normal airport, as well as circumstantial aspects associated with the same operation as maintenance, occasional closures, military operations, human factors and technical aspects, among others.

1.5 The measures that were adopted by the flow unit of Colombia, through a process of building collaborative decisions, allowed streamline the flow to Eldorado airport, avoiding, if possible, aircraft delays, which was taking place as a result of the increased traffic in recent years (civilian and military operations), and to achieve an approach continuous sequence, to face the reality of increased operations to the aerodrome by day of the week shown below:



1.6 The success of the Flow Unit of Colombia, joined with the process that had begun long ago in order to consolidate the ATFM in Colombian airspace, proved the correct decision of UAEAC to implement this service at the national level and today is the backbone of transit planning purposes, and the organization of flow measures that will extend over the every operation that uses the air navigation services provided by Colombia.

1.7 Growth prospects are positive, on one hand Airlines are renewing and expanding its fleet, Avianca will have a fleet added by B-787 Dream Liner and A-319, A-320 and A-330, with the purchase of 60 Airbus and 10 Boeing, for its part AeroRepublica is incorporating Embraer 190 aircraft and expand its international operation, SATENA, the state airline, that was certified and has its AOC, has plans for internationalization and increase its domestic operations, based on a new Embraer fleet 145R, 170 and 190; AIRES, also with 15 turboprop planes from the Canadian company Bombardier, De Havilland Dash 8-100, 8-200 and 8-300 seeks to increase and renew its fleet, other small companies are already operating and Two new airlines are looking for access to domestic and international markets.

1.8 A policy of flexibility of international markets has provided new frequencies with key markets like the United States, Spain and other destinations allowing a more extensive use of routes from Colombia, also the reaction of the markets of South America, the Andean region and Central America will help stimulate operations on the Colombian airspace.

1.9 With the release of airports in concession under investment policies that will increase airport capacity and improve all operational conditions from the main cities and consolidating Bogota as a hub, there will be an extra capacity that must be managed

1.10 That is how the decision taken by UAEAC to establish a Flow Unit with responsibility on all of its air space can be maintained and consolidated as the main strategy for the management of its airspace and relations with the adjacent FIRs in connection with planning and management of the flow.

2. Discussion

2.1 The Air Traffic Flow Management (ATFM) is essential for Colombia because ensure optimum air traffic flow into certain areas or across them during periods when demand exceeds or is expected to exceed the available capacity of the ATC system, reduces delays and other benefits already known.

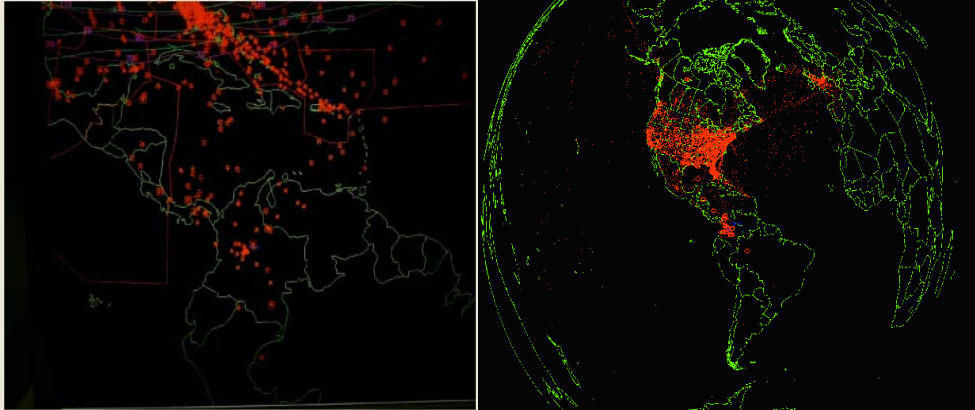
2.2 According to the new needs in the structure of air traffic in Colombia and the trend of increasing its takes to steer the process towards the ATFM which makes essential the implementation of the CFMU (Central Flow Management Unit).

2.3 Colombia has been involved and has made known his decision to the First Preparatory Meeting of the ATFM Task Force of the ATM Committee of the Subgroup ATM / CNS of GREPECAS. Sao Jose dos Campos - Brazil in 2005; The Second and Third Meeting of Management of Air Traffic Flow Task Force in the CAR / SAM ATM Subgroup of the ATM / CNS of GREPECAS 2006 and 2007.

2.4 Colombia has signed with the FAA an agreement, which sets out the terms and conditions for using the ETMS system, the exchange of non-critical radar data and information from domestic and ocean flights, that document was signed on June 13, 2003.

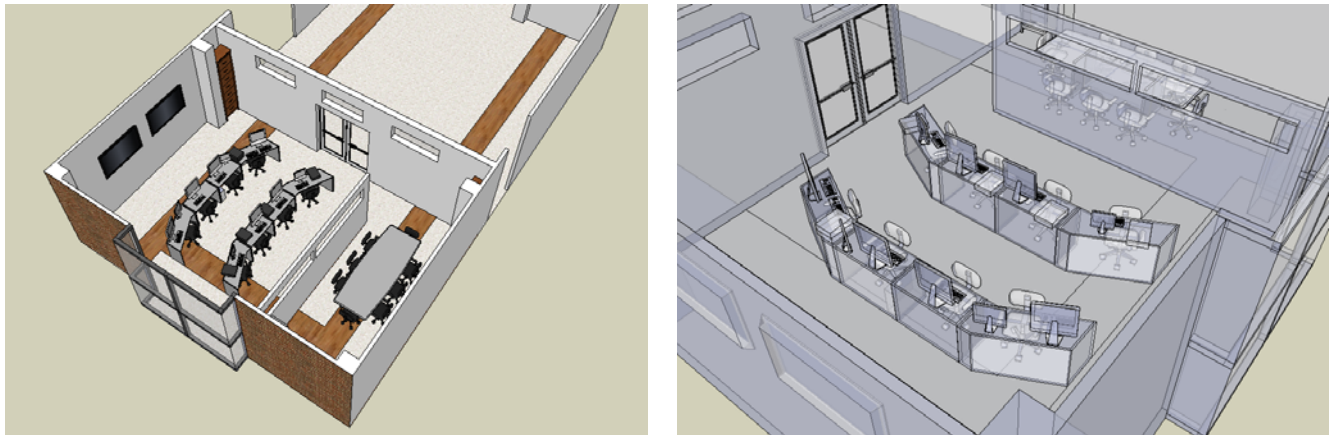
2.5 The UAEAC and the FAA have worked on the adaptation of radar data to TZ format to integrate them, adjusting flight plans, implementation of communication network to exchange information of flow, among other aspects.

2.6 The ETMS generates flow traffic data from two primary kinds of information: the recurrent and scheduled flights plans, along with the radar data. Additionally, the system could include meteorological data (wind reports, METAR / TAF, reports of storms, etc.) among others. Once the data have been supplied, VOLPE servers process the information transmitted by the IDP Colombia generating the on-screen display, so the situation of air traffic and weather that are happening in real time.



Traffic situation presented by the ETMS.

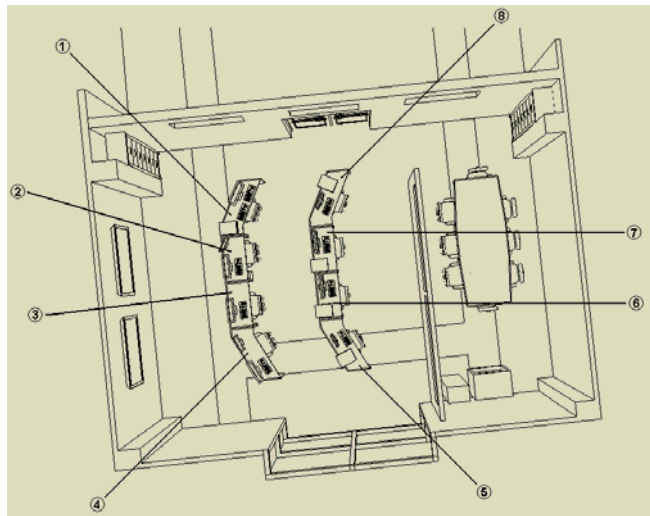
2.7 Once defined the positions involved in the air traffic flow management, in Colombia was structured the flow unit as shown below:



FMU Colombia Upper Three-dimensional image.



CFMU room - Colombia



FMU Colombia physical and logical distribution.

- | | |
|----------------------------|------------------------|
| 1. Meteorological | 5. Colombian Air Force |
| 2. Principal ATC | 6. CNS Facilities |
| 3. ATC Planner | 7. Manager |
| 4. FDP, RPL and Statistics | 8. Air Operators |

2.8 The preoperational test will be conducted in May 14th and the flow management service will be provided from the new CFMU room, today it is operational from those facilities.

3. Conclusion

3.1 Colombia has implemented a CFMU for its airspace, today, it is essential for the provision of an organized, efficient and safe service, is working to increase its capacity and establish operational relations with the nearby FIRs.

4. Action by the GREPECAS

4.1 The meeting is invited to take note of the information contained and consider the impact of the Colombian decision on regional initiatives for implementation of ATFM.

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