

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**

**EIGHTH MEETING OF CIVIL AVIATION AUTHORITIES OF THE SAM REGION  
(RAAC/8)**

(Buenos Aires, Argentina, 23 - 25 April 2003)

**Agenda Item 5: Review of regional activities related to the reduction or elimination of deficiencies detected in air navigation services**

**INTERNATIONAL TRAFFIC FLOW MANAGEMENT CAPABILITY**

(presented by Colombia)

**Summary**

The purpose of this working paper is to request ICAO to urge the States to adopt measures to standardise international traffic flow management capabilities.

**Reference document:**

Regional air navigation plan FASID – Shortcomings and deficiencies

**1. Introduction**

1.1 Most air traffic flows from North to South America cross the airspace of the Caribbean and the Andean region. The activity in this region is extremely intense and expected growth shows a positive trend for the coming years. This forces air traffic service providers to envisage systems that will meet this demand in a homogeneous manner. Differences in air traffic management capabilities and in the tools available to the controller represent one of the paradoxes implicit in today's aviation, namely the coexistence of conventional and high technology in a common regional airspace, thus creating differences in aircraft management capabilities, where flow capacity is determined by the ATS service provider with the lowest capability.

**2. Analysis**

2.1 While international airlines have made efforts to modernise their fleets with innovative avionics systems, there are still air traffic control units where controllers lack the full set of communication and surveillance tools. As a result, they must rely on position reports, and continue tracking aircraft through HF or VHF radios, which are many times obsolete, and recording their activity in pieces of paper, as has been done since the sixties.

2.2 The new ATS service provision and operation technologies, counterpart to FANS systems, which are currently available in most of the aircraft in the region, represent a significant change that is only useful to the extent service providers can guarantee controllers the use of more sophisticated tools to increase the capability to serve aircraft.

2.3 The FANS is the air navigation system of a future that is closer every day, the acclaimed solution proposed two decades ago which supposedly optimised the ATC by means of text message processing, in addition to precise satellite navigation, automatic positioning and surveillance systems. At that time, it was thought that the FANS would finally help increase aircraft management capability in the airspace, based on a new aviation inter-relationship controlled from the ground.

2.4 Thus, airspaces would be set free from conventional rigidity and adopt more flexible structures, thus shortening distances and increasing aircraft management capabilities, highly convenient during peak hours.

2.5 For years, the FANS evolved as a synthesis of technologies based on satellites known to form part of the CNS/ATM systems, in such a way that communications, navigation and surveillance are used for air traffic management. This was a hypothetical concept 20 years ago, when the FANS monopolised the debates within ICAO, and now these technologies are available to ATS service providers.

2.6 The dilemma of the region and the challenge for service provision is to achieve a homogeneous scenario where the final goal is for airlines to derive maximum benefit from airborne equipment. The initial goal would be for current flows to permit the application of reduced separations in uncontrolled areas or the correction of the deficiencies detected in specific airspaces, so as to give continuity to traffic flows through the co-operation of other States or new facilities.

### **3. Recommendations**

3.1 It is suggested that the meeting recommend ICAO to study air traffic flow management capabilities of the various airspaces in the Central Caribbean, identifying those with less capacity so as to request the States to develop action plans for standardisation with the adjacent FIRs and to advise them on international co-operation mechanisms to increase the average capacity of continental flows.

### **4. Suggested action**

4.1 The suggestion is put forward to the participants of the meeting to include a conclusion in the final report, tasking ICAO with the search for actions aimed at providing a homogeneous scenario, where the final goal is for airlines to derive maximum benefit from airborne equipment. The initial goal would be for current flows to permit the application of reduced separations after correcting the deficiencies detected in specific airspaces which, or to delegate on those other States that, because of their infrastructure, can improve service provision.